

... *Hand-book* . . .

to the

Flora of Natal,

BY

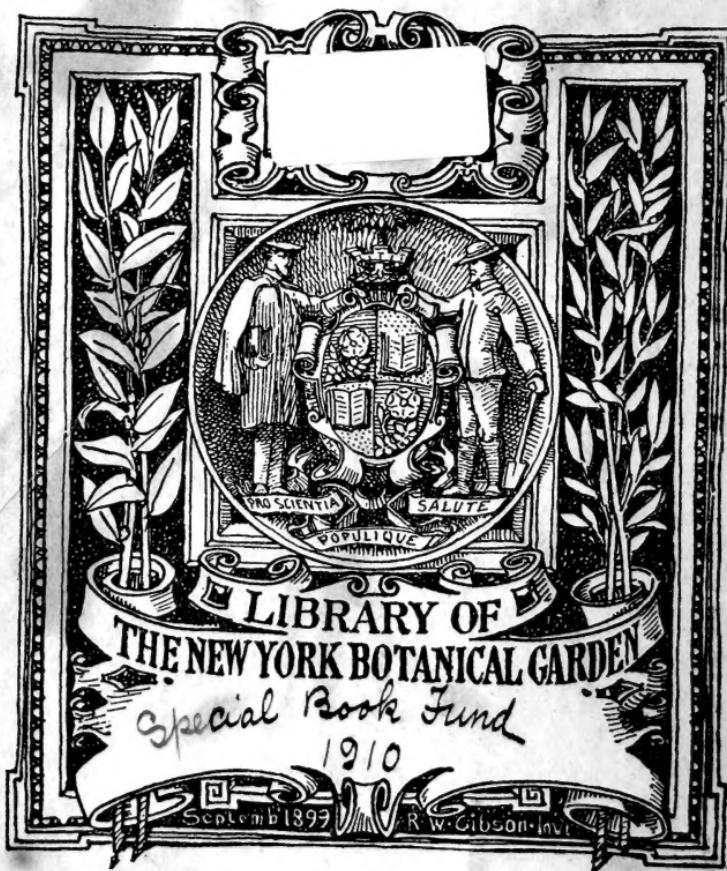
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OF GREAT BRITAIN.*

DURBAN, NATAL.

BURTON & DAVIS, PRINTERS, SMITH AND GARDNER'S STUDENTS.

1888.



— A —

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— BY —

J. MEDLEY WOOD, A.L.S.;

*CORRESPONDING MEMBER OF THE PHARMACEUTICAL SOCIETY
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DIRECTOR

— OF THE —

NATAL BOTANIC GARDENS

— AND —

COLONIAL HERBARIUM.

LITERARY

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P R E F A C E.

In the year 1888 there was issued from the Colonial Herbarium, which was then in its infancy, a small pamphlet entitled "An Analytical Key to the Natural Orders and Genera of Natal Indigenous Plants"; this work which it must be admitted was very defective, was, however, found useful, but is now quite out of date. In 1894 there was issued from the same Institution a "Preliminary Catalogue of Indigenous Natal Plants" which contained the names of the plants only, with an indication of the altitudes above the sea level at which they had been observed, but without any other information about them; the present work is an attempt to combine the two previous attempts with such additions and corrections as longer experience and fuller information from outside sources has shown to be necessary. The "Preliminary Catalogue" included 131, (by mistake 129) Orders, 828 genera, 2216 species and 391 varieties or unnamed species. Since the publication of that List numerous names have been added, partly by the collection of specimens which included species not previously known to us to be natives of Natal, but chiefly by the continuation of the *Flora Capensis*, of which work, one complete Volume and six Parts of other volumes have been issued, in all of which are enumerated species not known to us, and some not included in our collection. The present List includes 133 Orders, 907 genera, 3447 species and 83 varieties, or plants not known to us to be specifically named. A number of the names have also been obtained from foreign publications which have come into our possession by exchange or otherwise, and it is thought that the list is now fairly complete, but any additional names which may come to our notice will appear in the Annual Reports of the Director of the Botanic Gardens and Herbarium.

The Keys to Orders and genera have been completely revised, and it is hoped that they may be found to be useful, while the Key of the large Order *Gramineæ* is abridged from that given in the *Flora Capensis* by omitting all genera and species which are not known to be indigenous or introduced into Natal. It has been found impracticable at present to write keys to the species; a large number of them are not in our collection, and of many of them we have not even a description, but any specimens sent to us will be examined and the names in most, if not in all cases will be supplied; printed directions for preparing and sending specimens will be sent on application, together with printed direction labels which will pass them free by post or rail.

In large genera such as *Indigofera*, *Senecio* and others it would have been an advantage to have arranged the species in the Sections to which they belong, but even this, for reasons given above has not been found to be feasible. In using the Keys it must be remembered that

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they refer to Natal plants only, and not necessarily to any not included in this List, also that they are quite arbitrary, and in many cases have little or no real botanical significance.

The Capital letters following the names of the species indicate roughly the altitude at which the plants have been found, in the largest number of cases by ourselves, in others the information has been obtained either from collectors other than ourselves, or from the works in which the plants have been described. but in some cases this information has not been obtainable. It must not be supposed that the plant is confined to the altitude given, but only, that it has been collected in the region indicated The significance of the letters is as under :

A, 0 to 1000 feet alt. ; B, 1000 to 2000 feet alt. ; C, 2000 to 3000 feet alt. ; D, 3000 to 4000 feet alt. ; E, 4000 to 5500 feet alt. ; F, over 5500 feet alt.

As the distribution of the Ferns is better known than that of the flowering plants, and collectors and admirers of them are more numerous, the localities are given with more precision, and the keys to the species are also given, these being taken with little alteration from a small pamphlet published by the writer in 1877, and which is now out of print.

The numbers prefixed to the Orders are the numbers under which they stand in the *Genera Plantarum*, the numbers wanting in our list, are those of Orders not represented in our flora ; they are as under, alphabetically arranged :—

Alismaceæ	Columelliaceæ	Hydrophyllaceæ	Pontederiaceæ
Aristolochiaceæ	Coriarieæ	Juglandeæ	Rapataceæ
Balanophoreæ	Cupulifereæ	Lacistemmaceæ	Roxburghiaceæ
Balanopseæ	Cyclanthaceæ	Leitneraceæ	Sabiaceæ
Batidiæ	Cyrilleæ	Lemnoaceæ	Salvadoraceæ
Berberidaceæ	Cytinaceæ	Loaseæ	Sarraceniaceæ
Bromeliaceæ	Datisceæ	Mayaceæ	Simarubeæ
Burmanniaceæ	Diapensaceæ	Monotropeæ	Stackhouseæ
Calycantheæ	Dilleniaceæ	Moringeæ	Stylineæ
Calycereæ	Dipterocarpeæ	Myoporineæ	Styraceæ
Canelliaceæ	Elatineæ	Myristiceæ	Taccaceæ
Caprifoliaceæ	Eleagnaceæ	Nepenthaceæ	Tamariscineæ
Casuarineæ	Empetraceæ	Orobanchaceæ	Ternstromiaceæ
Centrolepideæ	Epacrideæ	Pandaneæ	Tremandreæ
Chaillettiaceæ	Frankeniaceæ	Penneaceæ	Triurideæ
Chloenaceæ	Gnetaceæ	Phyllidraceæ	Turneraceæ
Chloranthaceæ	Humariaceæ	Platanaceæ	Vacciniaceæ
Cistineæ	Hydrocharideæ	Polemoniaceæ	Vochsiaceæ

The following Orders are in Natal represented by one indigenous species only, so far as known to us at present.

Bruniaceæ	Connaraceæ	Guttifereæ	Resedaceæ
Burseraceæ	Cornaceæ	Illicineæ	Salicineæ
Ceratophylleæ	Flagellarieæ	Monimiaceæ	Typhaceæ
Cactæ	Goodenovieæ	Pittosporæ	Zygophylleæ

In conclusion I wish to offer my sincere thanks to the author and editors of the *Flora Capensis*; without the assistance obtained from that work the present attempt could hardly have been made, also to Prof. H. H. W. Pearson, M.A., F.L.S., who so kindly looked over all our specimens of *Thymeliaceæ*, and supplied us with the names as far as it was possible to do so at present; to Dr. Harry Bolus, F.L.S., of Capetown who has supplied us with the names of a number of plants which were not in our collection, or known to us as natives of Natal, and with other information which has been of much use to us; and also to Mr. M. S. Evans, C.M.G., M.L.A., who has kindly allowed us the use of the lists received from Kew of the names of the plants of his own collection, and has contributed some of them to the Colonial Herbarium; to the whole of these gentlemen I am much indebted for the assistance so freely given.

J. MEDLEY WOOD.



CONSPECTUS.

DICOTYLEDONS OR EXOGENS.

Spiral vessels present.

Stem when perennial having pith in centre, surrounded by wood and bark in concentric layers.

Leaves usually with branched and netted venation.

Perianth usually of 4 or 5 parts in each whorl, or multiples of those numbers.

Embryo with two or more cotyledons.

MONOCOTYLEDONS OR ENDOGENS.

Spiral vessels present.

Stem when perennial without separable bark, wood and pith.

Leaves with parallel venation, or if netted then the veinlets are parallel.

Perianth when present of 3 or 6 parts.

Stamens 3, or multiples of that number.

Embryo with 1 cotyledon.

ACOTYLEDONS.

Spiral vessels none, tissue scalariform or entirely cellular.

Stamens, pistil and ovules none.

Propagation effected by spores, not seeds.

Spores first producing either a prothallus, or microscopic threads.

DICOTYLEDONS.

Ovules in an ovary, seeds in a seed vessel.

ANGIOSPERMEÆ.

Ovules naked, not in an ovary, usually in axils of bracts or scales.

GYMNOSPERMEÆ.

ANGIOSPERMEÆ.

Sepals usually distinct from each other, inferior.

Petals usually distinct from each other, hypogynous.

Stamens hypogynous, rarely on a disk or on base of petals.

Ovary very rarely inferior.

THALAMIFLOREÆ.

Sepals distinct from each other, rarely connate, imbricate, rarely valvate or adnate to ovary.

Disk usually conspicuous, expanded or lobed.

Petals inserted at base of disk.

Stamens inserted at base of, upon, within or between the lobes of the disk.

Ovary free, or immersed in the disk, rarely inferior.

DISCIFLOREÆ.

Sepals connate in a tube which is free or adnate to the ovary.

Disk usually inconspicuous.

Petals inserted on calyx tube, free or connate in a gamopetalous corolla.

Stamens on calyx tube or base of its lobes, or epipetalous.

Ovary superior or inferior.

CALYCIFLOREÆ.

THALAMIFLOREÆ.

Stamens numerous, filaments free.

A.

Stamens numerous, filaments connate.

B.

Stamens not more than 12, filaments free.

C.

Stamens not more than 12, filaments connate.

D.

A.

Trees, shrubs, undershrubs or climbers.

1.

Herbaceous or aquatic plants.

3.

1 Sepals 4-8, free. Petals none. Flowers yellow.

1 Sepals 3, free. Petals 6 in two rows. Flowers white or cream

1.

1 Sepals 4-5, free. Petals 4-8 or more. Ovary stalked.

I RANUNCULACEÆ.

1 Sepals 3-5, more or less united at base.

V ANONACEÆ.

2 Shrubs with alternate, exstipulate leaves.

XII CAPPARIDEÆ.

2 Shrubs or undershrubs. Leaves stipulate.

2.

3 Aquatic plants with blue, white or pink flowers. Carpels concrete.

XVII BIXINEÆ.

3 Aquatic or terrestrial. Flowers never blue. Carpels separate.

XXXIII TILIACEÆ.

3 Terrestrial. Flowers yellow. Stigmas radiate. Fruit capsular.

VIII NYMPHEACEÆ.

3 Terrestrial. Flowers red. Style slender. Fruit capsular.

I RANUNCULACEÆ.

3 Shrubs or herbs. Flowers yellow. Stigmas 3, or style, 3-8-fid. Fruit capsular.

X PAPAVERACEÆ.

X PAPAVERACEÆ.

XXIII PORTULACACEÆ.

B.

Stamens monadelphous. Anthers 1-celled.
 Stamens monadelphous. Anthers 2-celled.
 Stamens polyadelphous. Anthers 2 celled
 Stamens connate in an entire or 4-lobed mass.

XXXI MALVACEÆ.
 XXXII STERCULIACEÆ.
 XXVI HYPERICINEÆ.
 XXVII GUTTIFEREÆ.

C.

Climbing plants without tendrils. 1.
 Shrubs or trees. 2.
 Herbaceous plants. 3.
 1 Fruit a pod Stamens tetrodynamous.
 1 Fruit a berry. Stamens equal.
 2 Calyx 5-12-parted. Flowers imperfect
 2 Sepals 2, Flowers bisexual.
 2 Sepals 5. Petals 5, their claws connivent.
 Flowers bisexual.
 3 Sepals 4, equal. Stamens tetrodynamous.
 3 Sepals 4-5. Stamens equal. Herbs.
 3 Stamens unequal. Lower petal very large.
 Herbs.
 3 Stamens subequal. Petals subequal. Shrub.

XI CRUCIFEREÆ.
 XXII CAPPARIDÆ.
 XVII BIXINEÆ.
 XXIII PORTULACÆ.

 XVIII PITTOSSOREÆ
 XI CRUCIFEREÆ.
 XXII GARYOPHYLLEÆ.

 XV VIOLARIEÆ.
 XV VIOLARIEÆ.

D.

Stamens diadelphous. Sepals 2, minute.
 Stamens monadelphous. Sepals 5, very unequal.
 Stamens monadelphous. Sepals equal. Flowers
 dioecious.
 Stamens monadelphous, sometimes unequal.
 Petals 2, minute. Flowers perfect.
 Stamens free. Sepals equal. Flowers perfect.
 Shrub.

X PAPAVERACEÆ.
 XX POLYGALÆ.

 VI MENISPERMACEÆ.

 XIII RESEDACEÆ.

 XV VIOLARIEÆ.

DISCIFLOREÆ.

Ovules pendulous, raphe ventral. Disk within
 the stamens or confluent with the staminal
 tube, reduced to glands, or obsolete.
 Ovules pendulous, raphe dorsal. Disk various
 or none.
 Ovules erect, raphe ventral. Disk thick and
 fleshy or adnate to the calyx. Stamens
 outside or upon it.
 Ovules ascending, raphe ventral or reversed,
 or suspended from a ventral funiculus, or
 pendulous with an inferior micropyle. Disk
 as in C, but stamens within, under or
 outside it.

A.
 B.
 C.
 D.

A.

Sepals and petals 3-5. Disk annular, within the stamens, or of glands alternating with the petals. Stamens definite. Carpels free or combined.

Stamens free. Flowers perfect.	1.
Stamens free. Flowers imperfect.	2.
Stamens connate. Flowers perfect.	3.
1 Fruit of 3-10 drupes. Anthers opening by pores at apex. Stamens many.	XLI OCHNACEÆ.
1 Fruit a drupe. Stamens 8-12.	XLII BURSERACEÆ.
1 Fruit a capsule or berry. Stamens 2-10.	XXXIX RUTACEÆ.
1 Fruit a samara. Stamens 10.	XXXVI MALPIGHIACEÆ.
1 Fruit a thorny capsule. Stamens 10.	XXXVII ZYGOPHYLLEÆ.
2 Fruit a capsule or berry.	XXXIX RUTACEÆ.
2 Fruit a drupe.	XLII BURSERACEÆ.
3 Filaments connate at base only. Ovary entire.	XXXIV LINEÆ.
3 Filaments connate at base only, or polyadelphous. Ovary lobed.	XXXVIII GERANIACEÆ.
3 Filaments connate their whole length. Anthers sessile.	XLIII MELIACEÆ.

B.

Flowers regular. Calyx small. Petals if present often valvate. Disk cup-shaped or glandular. Stamens definite. Ovary 1-celled, with 1-3-ovules pendulous from a central placenta, or 2-or more celled with 1-2-ovules pendulous from the top of each cell. Leaves usually stipulate.

Disk annular or 4-5-lobed. Ovary 1-3-celled.	XLV OLACINEÆ.
Disk none. Ovary 4-6-, rarely 7-8-celled.	XLVI ILCINEÆ.

C.

Flowers regular or irregular, small, usually perfect. Sepals and petals 4-5. Disk cushion-like, and adnate to base of calyx. Stamens definite, on margin or base of disk. Ovary 2-or more celled, free or immersed in the disk. Ovules 1-2, erect, rarely 3-6, on inner angle of cells.

Stamens alternate with petals.	XLVII CELASTRINEÆ.
Stamens opposite petals. Leaves simple. Style 2-4-fid.	XLIX RHAMNEÆ.
Stamens opposite petals. Leaves simple or compound. Style conical, short, subulate or none.	L AMPELIDEÆ.

D.

Flowers regular or irregular, usually unisexual. Disk adnate to base of calyx. Stamens definite or indefinite, inserted upon, or within the disk. Ovary 1-or more celled, ovules 1-2 in each cell. Leaves often compound.

Fruit a capsule, of leathery indehiscent carpels. LI SAPINDACEÆ.
 Fruit a drupe. LIII ANACARDIACEÆ.

CALYCIFLOREÆ.

Flowers having both calyx and corolla. Petals usually free.
 Flowers having both calyx and corolla. Petals united.
 Perianth in one series. Flowers regular or nearly so.
 Perianth absent.

POLYPETALEÆ.
 MONOPETALEÆ.
 MONOCHLAMYDEÆ.
 ACHLAMYDEÆ.

POLYPETALEÆ.

Ovary superior.
 Ovary inferior or half inferior.

A.
 B.

A.

Fruit capsular.	1.
Fruit pod-like.	3.
Fruit a drupe, capsule or berry.	4.
1 Leaves alternate, imparipinnate.	LVI CONNARACEÆ.
1 Leaves alternate, equally pinnate.	LIX SAXIFRAGEÆ.
1 Leaves simple.	2.
2 Capsule 1-celled, several seeded. Flowers imperfect or with a corona.	LXXIV PASSIFLOREÆ.
2 Capsule 2-celled, 2-coccous. Leaves imbricate, heath-like.	LXIII BRUNIACEÆ.
2 Capsule 2-celled, didymous, cells 1-seeded. Leaves expanded.	LXII HAMAMELIDEÆ.
2 Capsule 2 or 4-celled, many seeded. Petals entire, deciduous.	LXIX LYTHRARIEÆ.
2 Capsule 3-4 celled, cells 1-seeded. Petals multifid.	LXV RHIZOPHOREÆ.
2 Capsule 5-celled, cells 1-or many seeded.	LXXIX FICOIDEÆ.
3 Fruit a legume, Style 1.	LVII LEGUMINOSÆ.
3 Fruit follicular. Styles as many as carpels.	LX CRASSULACEÆ.
4 Fruit of 2 hemispherical carpels, united by their flat sides.	LXXIX FICOIDEÆ.
4 Fruit of many small drupes, or of one or more achenes.	LVIII RosACEÆ.
Marsh or aquatic plants. Trees or stemless herbs.	1.
Trees, shrubs or climbers of dry ground, or shrubby parasites.	2.
1 Fruit perforated by germinating embryo. Trees.	LXV RHIZOPHOREÆ.
1 Fruit nut-like or fleshy. Herbs.	6. LXIV HALORAGEÆ.
1 Fruit fleshy or corky, 4-angled. Trees.	LXVII MYRTACEÆ.
2 Fruit capsular or dry.	3.
2 Fruit a drupe or berry.	4.

2 Fruit fleshy, corky or gourd-like. 5.

3 Capsule enclosed in calyx. Stamens unequal.
Under shrub or herbs.

3 Capsule half enclosed in calyx. Stamens equal. Shrubs or trees.

3 Capsule not enclosed in calyx.

3 Capsule splitting from apex to base.

3 Capsule 3-winged, many seeded.

3 Capsule with star-like opening at apex.

3 Fruit of 2 dry separable carpels. Flowers umbellate.

4 Parasitical shrubby plants.

4 Leafless succulent herbs.

4 Climbers or prostrate herbs.

4 Trees or shrubs.

5 Fruit fleshy or corky, 4-angled, 1-celled.

5 Fruit a gourd, or berry.

5 Fruit fleshy or nearly dry, 2-many celled.

6 Stamens numerous, on margin of calyx tube.

6 Stamens definite, not more than 12.

7 Trees with simple leaves. Fruit a 2-4-celled nut.

7 Trees or shrubs with simple leaves. Fruit a drupe.

7 Trees with simple leaves. Fruit a winged or ribbed drupe.

7 Trees with palmate leaves. Fruit a berry.

LXVIII MELASTOMACEÆ.

LXXI SAMYDACEÆ.

LXX ONAGRARIEÆ.

LIX SAXIFRAGEÆ.

LXXVI BEGONIACEÆ.

LXXIX FICOIDEÆ,

LXXX UMBELLIFEREÆ.

CXLVIII LORANTHACEÆ

LXXVIII CACTEÆ.

LXXV CUCURBITACEÆ.

6.

LXVII MYRTACEÆ.

LXXV CUCURBITACEÆ.

LXXXI ARALIACEÆ.

LXVII MYRTACEÆ.

7.

LXXXII CORNACEÆ.

LXVIII MELASTOMACEÆ

LXVI COMBRETACEÆ,

LXXXI ARALIACEÆ.

MONOPETALEÆ.

OVARY INFERIOR.

Flowers in heads surrounded by an involucre. A.

Flowers separate, without involucre. B.

A.

Stamens free from each other.

Stamens united by their anthers.

LXXXVI DIPSACEÆ.

LXXXVIII COMPOSITEÆ.

B.

Stamens on corolla alternate with its lobes.

Stamens on corolla, opposite to its lobes. Trees or shrubs.

Stamens 3, on a 5-lobed corolla. Calyx limb plumose in fruit.

Stamens epigynous. Fruit a capsule. Ovary inferior or half inferior.

Stamens epigynous. Fruit a drupe. Style indusiate.

LXXXIV RUBIACEÆ.

C MYRSINEÆ.

LXXXV VALERIANÆ.

XCI CAMPANULACEÆ.

XC GOODENOVIDÆ.

OVARY SUPERIOR.

Corolla regular.
Corolla irregular.

C.
D.

C.

COROLLA REGULAR.

Flowers dioecious, monoeious, or polygamous.	1.
Flowers perfect.	2.
1 Fruit a 1-3-celled berry.	CII EBENACEÆ.
1 Fruit a drupe or many seeded berry.	C MYRSINEÆ.
2 Stamens 5, monadelphous. Pollen in masses (pollinia).	CVII ASCLEPIADACEÆ.
2 Stamens 2, on corolla tube.	CIV OLEACEÆ.
2 Stamens opposite corolla lobes.	3.
2 Stamens alternate with corolla lobes.	4.
3 Herbs with capsular fruit.	XCIX PRIMULACEÆ.
3 Trees. Fruit a drupe or berry.	CI SAPOTACEÆ.
3 Shrubs, erect or climbing, or herbs. Fruit a utricle.	XCVIII PLUMBAGINEÆ.
4 Leaves alternate.	5.
4 Leaves opposite or whorled.	6.
4 Leaves radical.	CXXVII PLANTAGINEÆ.
5 Stamens didynamous.	7.
5 Stamens equal or nearly so.	8.
7 Herbs or undershrubs. Anthers 1-celled.	CXXIV SELAGINEÆ.
7 Herbs, undershrubs or trees. Anthers 2-celled.	CXXV VERBENACEÆ.
8 Shrubs or herbs. Ovary 1-2-celled, many seeded.	CXIV SOLANACEÆ.
8 Shrubs or herbs. Ovary 2-4-celled. Ovules solitary.	CXII BORAGINEÆ.
6 Trees or undershrubs.	9.
6 Herbs.	10.
9 Leaves stipulate. Calyx 4-6-fid. Stamens 4-6.	CVIII LOGANIACEÆ.
9 Leaves exstipulate.	11.
11 Corolla 5-lobed. Æstivation valvate or contorted. Juice milky.	CVI APOCYNACEÆ.
11 Corolla 5-fid. Æstivation plaited. Juice watery.	CXIV SOLANACEÆ.
11 Corolla irregular or subregular. Fruit a drupe with 2-6 pyrenes, or dry, and of 2-4 separable nuts.	CXXV VERBENACEÆ.
11 Corolla regular, 4-lobed. Stamens 8. Leaves linear.	XCIII ERICACEÆ.
10 Ovary 1-2-celled, many seeded.	CIX GENTIANÆ.
10 Ovary 2-4-celled. Cells 1-2-ovuled.	CXXV VERBENACEÆ.

D.

COROLLA IRREGULAR.

Leaves alternate.	1.
Leaves opposite.	2.
Leaves radical.	3.
1 Fruit many seeded.	CXV SCROPHULARIACEÆ.
1 Fruit 1-4-seeded.	CXII BORAGINEÆ.
1 Fruit 2-horned, many seeded.	CXXI PEDALINEÆ.
2 Fruit many seeded.	4.
2 Fruit not more than 8-seeded.	5.
2 Fruit not more than 4-seeded. Style issuing from base of ovarian lobes.	CXXVI LABIATÆ.
4 Leaves simple. Capsule not horned.	CXV SCROPHULARIACEÆ.
4 Leaves polymorphous. Capsule 2-horned.	CXXI PEDALINEÆ.
4 Leaves compound. Seeds winged.	CXX BIGNONIACEÆ.
5 Fruit capsular. Seeds subtended by processes of the placenta.	CXXII ACANTHACEÆ.
5 Fruit capsular or drupaceous. Seeds erect.	CXXV VERBENACEÆ.
3 Stamens 5; anthers 2-celled. Capsule spirally twisted.	CXIX GESNERACEÆ.
3 Stamens 2; anthers 1-celled. Capsule not twisted.	CXVII LENTIBULARINEÆ.
3 Stamens 4; anthers 2-celled. Capsule circumscissile.	CXXVII PLANTAGINEÆ.

MONOCHLAMYDEÆ.

Flowers perfect (i.e. having stamens and pistil).

A.

Flowers imperfect or polygamous.

B.

A. FLOWERS PERFECT.

Leafless, parasitical or aquatic plants.	1.
Trees.	2.
Shrubs and undershrubs.	3.
Herbs.	4.
1 Perianth bag-like. Stamens 1-2. Leaves minute.	CXXXI CHENOPODIACEÆ.
1 Perianth spathe-like or membranous or 0. Stamens 1-2 Aquatic.	CXXXV PODOSTEMMACEÆ.
1 Cord-like, leafless parasites, attached by disks.	CXLIII LAURINEÆ.
1 Leafy or leafless shrubby parasites.	CXLVIII LORANTHACEÆ.
2 Fertile stamens 9.	CXLIII LAURINEÆ.
2 Fertile stamens 3-4.	CXLIV PROTEACEÆ.
2 Fertile stamens many.	CXLII MONIMIACEÆ.
3 Fruit of aggregated drupes. Stamens 5-30.	CXXXII PHYTOLACCEÆ.
3 Fruit nut-like. Stamens 4-8-10. Ovary free.	CXLV THYMELIACEÆ.
3 Fruit nut-like. Stamens 4-5. Ovary inferior.	CXLIX SANTALACEÆ.

3	Fruit capsular. Flowers dioecious.	CLX SALICINEÆ.
4	Leaves stipulate.	5.
4	Leaves exstipulate.	6.
5	Stipules sheathing; nodes swollen.	CXXXIV POLYGONACEÆ.
5	Stipules scarious. Flowers minute.	CXXIX ILLECEBRACEÆ.
6	Perianth membranous, dry, persistent.	CXXX AMARANTACEÆ.
6	Perianth herbaceous.	7.
7	Stamens 5-30. Fruit of many aggregated drupes.	CXXXII PHYTOLACCEÆ.
7	Stamens 1-4, connate in a ring at base.	CXXVIII NYCTAGINEÆ.
7	Stamens 5, on base of perianth. Ovary inferior.	CXLIX SANTALACEÆ.

B. FLOWERS IMPERFECT OR POLYGAMOUS.

Leaves stipulate.	1.
Leaves exstipulate.	2.
Leaves verticillate.	CLXIII CERATOPHYLLEÆ.
1 Capsule 2-3-celled, few seeded, or drupe 1 seeded.	CLI EUPHORBIACEÆ.
1 Fruit a berry, nut, achene or samara.	CLIII URTICACEÆ.
2 Fruit of aggregated drupes Undershrubs.	CXXXII PHYTOLACCEÆ.
2 Fruit a succulent berry. Parasitical shrubs.	CXLVIII LORANTHACEÆ.
2 Fruit a berry seated in base of perianth. Trees.	CXLIII LAURINEÆ.
2 Fruit enclosed in herbaceous perianth. Herbs or undershrubs.	CXXXI CHENOPODIACEÆ.

ACHLAMYDEÆ.

Perianth 0, the stamens and pistils being usually placed in the axils of the bracts of cones or catkins. Flowers almost always minute and unisexual,	
Aquatic plants attached to stones in streams.	CXXXV PODOSTEMMACEÆ.
Terrestrial plants.	
Shrubs Fruit a bivalved many seeded capsule.	CLX SALICINEÆ.
Shrubs. Fruit dry indehiscent, covered with waxy scales.	CLVII MYRICACEÆ.
More or less succulent plants with jointed stems.	CXXXIX PIPERACEÆ.

GYMNOSPERMEÆ.

Ovules naked, not enclosed in an ovary, usually placed in the axils of the bracts or scales of a cone.	
Flowers in catkins. Trees.	CLXV CONIFEREÆ.
Flowers in cones. Palm or Fern-like plants.	CLXVI CYCADACEÆ.

MONOCOTYLEDONS.

Flowers with a usually distinct and coloured perianth of one or two whorls.

PETALOIDEÆ.

Flowers minute, in the axils of chaff-like scales or bracts, which are usually arranged in spikes, spikelets or catkins. Perianth O or very imperfect.

GLUMACEÆ.

PETALOIDEÆ.

Ovary inferior.

A. EPIGYNE.

Ovary superior.

B. HYPOGYNE.

A. EPIGYNE.

Stamens united in a central column.

CLXIX ORCHIDEÆ.

Stamens 3, anthers extrorse.

CLXXIII IRIDEÆ.

Stamens 3, anthers introrse.

CLXXVI DIOSCORIDEÆ.

Stamens 1 or 5, anthers introrse.

CLXX SCITAMINEÆ.

Stamens 6, anthers introrse.

CLXXVI DIOSCORIDEÆ.

Climbers.

CLXXIV AMARYLLIDEÆ.

Herbs, not climbing.

B. HYPOGYNE.

Flowers perfect.

1.

Flowers imperfect.

2.

1. Flowers spicate.

3.

1. Flowers not spicate.

4.

3 Spikes cone-like. Flowers yellow.

CLXXXI XYRIDEÆ.

3 Spikes elongate. Flowers green or white.

CXCV NAJADACEÆ.

4 Leaves sheathing, ending in a tendril.

5.

4 Leaves not sheathing nor tendril bearing.

6.

5 Climbing shrubs.

CLXXXV FLAGELLARIEÆ.

5 Climbing herbs with orange coloured flowers.

CLXXVIII LILIACEÆ.

6 Nodes swollen.

CLXXXIII COMMELINACEÆ.

6 Nodes not swollen. Flowers glumaceous.

CLXXXVI JUNCACEÆ.

6 Nodes not swollen. Flowers herbaceous.

CLXXVIII LILIACEÆ.

6 Stenless herbs with thick creeping rhizomes.

CLXXII HEMODORACEÆ.

2 Flowers on a spadix with a spathe.

7.

2 Flowers not spathaceous

8.

7 Leaves pinnate or fan-shaped.

CLXXXVII PALMÆ.

7 Leaves linear.

CXC TYPHACEÆ.

7 Leaves ovate, sagittate or pedate.

CXCI AROIDEÆ.

8 Plant climbing.

CLXXVIII LILIACEÆ.

8 Plant erect. Flowers monoecious. Leaves rosulate

CXCVI ERIOCAULEÆ.

8 Plant erect. Flowers dioecious. Leaves sheathing.

CXCVIII RESTIACEÆ.

GLUMACEÆ

Leaves with entire, or very rarely split sheaths. Anthers basifix'd CXVCIX CYPERACEÆ.
 Leaves with split sheaths. Anthers versatile. CC GRAMINEÆ.

ACOTYLEDONS.

Capsules all of one kind. Spores producing a prothallus on which antheridia and archegonia are developed

A.

Capsules of two kinds, one containing macro-spores which produce a prothallus which bears archegonia, and the other micro-spores which produce antheridia.

B.

A.

Capsules in clusters on the back or edge of leafy fronds, rarely forming spikes or panicles. Elaters O.

FILICES.

Capsules placed on the underside of stalked, peltate scales, which form a cone at the end of a jointed leafless stem or branch. Elaters present.

EQUISETACEÆ.

Capsules solitary in the axils of small closely placed 1-nerved leaves or bracts. Elaters O.

LYCOPODIACEÆ.

B.

Capsules of both kinds solitary in the axils of small, closely placed 1-nerved leaves or bracts, those with large spores having several in each capsule.

SELAGINELLACEÆ.

Spores of two kinds, the sporangia of the large spores having one spore only in each capsule.

RHIZOCARPEÆ.



DICOTYLEDONS.

ORDER I. RANUNCULACEÆ.

Most of the members of this Order possess acrid properties, and some are poisonous, but these properties are driven off by heat; some of the Knowltonias are vesicant, as are also some of the Anemones. Number of species about 1200.

(Ex. CLEMATIS, BUTTERCUP.)

Climbing slender shrubs with opposite leaves.	CLEMATIS.
Herbaceous plants. Leaves alternate or radical.	
1 Sepals coloured, no true petals.	1.
1 Sepals green. Petals present.	2.
2 Sepals 4-5. Carpels few, without tails.	THALICTRUM.
2 Sepals many. Carpels many, tailed.	ANEMONE.
3 Petals with simple claws. Carpels fleshy.	KNOWLTONIA.
3 Petals with scale or pit on the claw. Carpels dry.	RANUNCULUS.

LIST OF SPECIES.

1 Clematis, Linn.		4 Knowltonia, Salisb.
brachiata, Thb.	B-C.	brevistylis, Syzzz.
glaucescens, Fresen.	C.	vesicatoria, Sims.
incisodentata, A. Rich.	C.	
Oweniae, Harv.	B-Z.	5 Ranunculus, Linn.
2 Thalictrum, Linn,		Baurii, MacOwan.
rhynchosarpum, D. & R.	C-D.	Cooperi, Oliv.
3 Anemone, Linn.		Meyeri, Harv.
caffra, E. & Z.	B.	pinnatus, Poir.
Fanniniæ, Harv.	B-E.	

ORDER V. ANONACEÆ.

Tropical shrubs, sometimes climbing, the bark and leaves of some of the foreign species have been used medicinally, but the Order is best known from its including the Custard apple, Sweet and Sour Sops and Cherimoyer. One of our species, *Anona senegalensis*, known to the natives as "i-Rabuja" bears an eatable fruit. Number of species about 400.

Carpels confluent in a many seeded fruit.	ANONA.
Carpels separate, on short pedicels.	
1 Petals imbricate. Ovules many.	UVARIA.
1 Petals valvate. Ovules 1-2, erect.	POPOWIA.
1 " " " " " Peduncles recurved.	ARTABOTRYS.

LIST OF SPECIES.

1 <i>Uvaria</i> , <i>Linn.</i>		3 <i>Popowia</i> , <i>Endl.</i>
caffra, <i>E. M.</i>	AB.	caffra, <i>H. & S.</i>
2 <i>Artobotrys</i> , <i>R. Br.</i>		4 <i>Anona</i> , <i>Linn.</i>
Monteiroiæ, <i>Oliv.</i>	A.	senegalensis, <i>Pers.</i>

ORDER VI. MENISPERMACEÆ.

This order includes many species which are used in medicine, such as the "Calumba" root, (*Cocculus palmata*), *Pariera Brava*, (*Cissampelos Pariera*), but it is doubtful whether our plant is the true *C. Pariera*, all of our species are climbers. Number of species 80 to 100, though more than these have been described by authors.

(Ex. UNTABAAN).

Pistillate flowers with 3-5 petals and sepals.	STEPHANIA.
Pistillate flowers with 1 petal and 1 stamen.	CISSAMPELOS.

LIST OF SPECIES.

1 <i>Stephania</i> , <i>Lour.</i>		natalensis, <i>Szysz.</i>	B.
hernandæfolia, <i>Walp.</i>	A-C.	Pariera, <i>Linn.</i>	AB.
		torulosa, <i>E.M.</i>	AB.
2 <i>Cissampelos</i> , <i>Linn.</i>			
Burchelliana, <i>Miers.</i>	B.		

ORDER VIII. NYMPHEACEÆ.

All aquatic plants with floating leaves ; the rootstocks of some of the species are used in some countries medicinally, and those of our only indigenous species are occasionally eaten by the natives. Number of species about 35.

(Ex. WATER LILY.)

<i>Nymphaea</i> , <i>Linn.</i>	
capensis, <i>Thb.</i>	A.
stellata, <i>Willd.</i>	A-D.

ORDER X. PAPAVERACEÆ.

Herbs or very rarely shrubs. The most important member of the family is *Papaver somniferum*, which yields the opium of commerce. The seeds of some other species of the Order are said to have narcotic properties. Number of species about 160.

(Ex. POPPY.)

Stigmas 4-20. Juice milky. "Wild Poppy."	PAPAVER.
Stigmas 4-6. Juice yellow (introduced).	ARGEMONE.
Style filiform. Stamens diadelphous, 3-3. Fruit subglobose.	FUMARIA.
Style filiform. Stamens diadelphous, 3-3. Fruit elongate, pod-like.	CORYDALIS.

LIST OF SPECIES.

1 <i>Papaver, Linn.</i>	3 <i>Fumaria, Linn.</i>	
horridum, <i>D.C.</i>	A-E officinalis, <i>Linn.</i>	A.
2 <i>Argemone, Linn.</i>	4 <i>Cordyalis, D.C.</i>	
mexicana, <i>Linn.</i>	A. pruinosa, <i>E.M.</i>	C.

ORDER XI. CRUCIFERÆ.

A large Order distributed all over the world, many members of which are used as food. It is only necessary to mention the Cabbage in its different forms, Turnip, Radish, Mustard, Cress, Water Cress, Rape, etc., some of the species have been used medicinally, but none are of much value. Number of enumerated species about 2200, which, according to the Genera Plantarum, may probably be reduced to 1200.

A. Siliquosæ. Pod several times as long as broad.

Pod with flat valves. 1

Pod with convex, round backed valves. 2

Seeds with flat accumbent cotyledons :—

1 Seeds in one row. Pod elastically opening CARDAMINE.

1 Seeds in one row. Pod not elastically opening ARABIS.

Seeds with linear elongate, twice folded cotyledons :—

1 Calyx equal at base. HELIOPHILA.

2 Seeds with flat accumbent cotyledons. NASTURTIUM.

2 Seeds with flat incumbent cotyledons SISYMBRIUM.

2 Seeds with broad cotyledons folded over the radicle. BRASSICA.

B. Siliculosoæ. Pod short few seeded, not thrice as long as broad.

Pod dehiscent. 3.

Pod indehiscent. SENEPIERA.

3 Pod with flattish valves and a broad septum. HELIOPHILA.

3 Pod with keeled or boat-shaped valves and a narrow septum. LEPIDIUM.

LIST OF SPECIES.

1 <i>Nasturtium, Br.</i>	4 <i>Sisymbrium, Linn.</i>	
fluviale, <i>E.M.</i>	C. capense, <i>Thb.</i>	A.
officinalis, <i>R.Br.</i>	A-E. , var <i>latifolium</i>	A.

2 <i>Arabis, Linn.</i>	5 <i>Heliophila, Linn.</i>	
perfoliata, <i>Lam.</i>	D. linearis, <i>D.O.</i>	A.

3 <i>Cardamine, Linn.</i>	rigidiuscula, <i>Sond.</i>	A.
africana, <i>Linn.</i>	scandens, <i>Harv.</i>	A.

	virgata, <i>Burch.</i>	AB.
--	------------------------	-----

6 *Brassica*, *Linn.*
strigosa, *D.C.*

8 *Lepidium*, *Linn.*
capense, *Thb.*

A.

7 *Senebiera*, *Poir.*
didyma, *Pers.*

A.

ORDER XII. CAPPARIDÆ.

This Order is best known from its including *Capparis spinosa*, from whose flower buds the Capers of commerce are prepared. The fruits and bark of some other species of the family have been used medicinally in the countries where they are indigenous, and none of them possess any poisonous properties. Number of species about 300

(EX. CAPER; WILDBOSCHOUT.)

Fruit a dry dehiscent pod-like capsule	1
Fruit a fleshy indehiscent berry	2
1 Torus small, inconspicuous.	CLEOME.
2 Calyx tube persistent. Limb deciduous, torus long. Berry ovoid.	NIEBUHRIA.
2 Calyx tube persistent. Limb deciduous, torus long. Berry elongate.	MAERUA.
2 Calyx tube absent, sepals deciduous.	3
3 Torus long, slender. Stamens 6.	CADABA.
3 Torus hemispherical. Stamens 8 or more. Petals 4.	CAPPARIS.
3 Torus short, glandular. Stamens 12-20. Petals 0.	BOSCIA.

LIST OF SPECIES.

1 <i>Oleome</i> , <i>Linn.</i>	4 <i>Cadaba</i> , <i>Forsk.</i>	
<i>monophylla</i> , <i>Linn</i>	B. <i>natalensis</i> , <i>Sond.</i>	A.
<i>rubella</i> , <i>Burm.</i>	C. <i>5 Capparis</i> , <i>Forsk.</i>	
2 <i>Niebuhria</i> , <i>D.C.</i>		
<i>rosmarinoides</i> , <i>Sond.</i>	A. <i>citrifolia</i> , <i>Lam.</i>	A.
<i>triphylla</i> , <i>Wendl.</i>	AB. <i>corymbifera</i> , <i>E.M.</i>	A.
<i>Woodii</i> , <i>Oliv.</i>	AB. <i>Gueinzii</i> , <i>Sond.</i>	A.
3 <i>Mærua</i> , <i>Forsk.</i>	B. <i>Zeyheri</i> , <i>Turcz.</i>	A.
<i>angolensis</i> .	?	C
<i>nervosa</i> , <i>Oliv.</i>	A. <i>sp.</i> (J. M. Wood, 4438)	
	6 <i>Boscia</i> , <i>Lamk.</i>	
	A. <i>caffra</i> , <i>Sond.</i>	A.

ORDER XIII. RESEDACEÆ.

Two plants only of this small family have any practical or commercial value. They are *Reseda lutea*, which yields a yellow dye, and *R. odorata*, the common Mignonette. The roots of some of the species are acrid. One species only has, so far, been found in Natal. Number of species about 60, which number, according to the *Genera Plantarum*, might be considerably reduced.

A decumbent plant with linear leaves.

OLIGOMERIS.

1 *Oligomeris*, *Cambess.*
Dregeana, *Presl.*

F

ORDER XV. VIOLARIEÆ.

An Order the best known species of which is probably *Viola odorata*, the common "Violet." The roots and leaves of some species of *Viola* have been used medicinally. The roots of some *Alsodeias* are emetic, and in America have been used as substitutes for Ipecacuhuana, and the root of an American species of *Ionidium* has been employed as a remedy for tubercular elephantiasis. Number of species about 240.

(EX. VIOLET.)

Petals 5, very unequal, lower largest. IONIDIUM.
Petals sub-equal, Filaments connate. A shrub. ALSODEIA.

LIST OF SPECIES.

1 <i>Ionidium, Vent.</i>	2 <i>Alsodeia, Thouars.</i>
caffrum, <i>Sond.</i>	A. sp (J. M. Wood, 1001)
capense, <i>R. & S.</i>	AB.
natalense, <i>Hari.</i>	B.
thymifolium, <i>Presl.</i>	Z.

ORDER XVII. BIXINEÆ.

Bixa orellana which yields Arnotto is, perhaps, the most prominent member of this Order. Amongst our species *Dovyalis rhamnoides* and *Aberia caffra* bear eatable fruits. All are trees or shrubs, but their wood is of little value. *Xylosma*, which formerly belonged to this Order, has been removed to Monimiaceæ, and its name altered to *Xymalos*. Number of species about 150.

(EX. KEI APPLE: UMNANAMI.)

Flowers bisexual or polygamous. Style columnar or short 1
Flowers unisexual, dioecious. Anthers opening at apex.
Petals 5.

Flowers unisexual, dioecious. Anthers slitting. Petals none.

1 Sepals deciduous. Petals 10-12, larger than sepals.

1 Sepals persistent. Petals 4-5, small, deciduous.

1 Calyx deeply 10-12 fid in 2 rows. Petals none.

2 Calyx 6-10 fid in a double row. Fruit a capsule.

2 Calyx 5-7 fid in a single row. Styles 3. Fruit a berry.

2 Calyx 5-7 fid in a single row. Styles 6. Fruit a berry.

KIGGELARIA

2

ONCOBA.

RAWSONIA.

SCOLOPIA.

TRIMERIS.

DOVYALIS.

ABERIA.

LIST OF SPECIES.

1 <i>Oncoba, Forsk.</i>	4 <i>Dovyalis, E.M.</i>
<i>Kraussiana, Planch.</i>	AB. <i>rhamnoides, Burch & Harv.</i> A.
<i>spinosa, Forsk.</i>	A. <i>rotundifolia, Thb.</i> A.
<i>tettensis, Hk. f.</i>	B. <i>5 Aberia, Hochst.</i>
	<i>caffra, Hk & Harv.</i> ?
	<i>longispina, Harv.</i> A.
2 <i>Rawsonia, H. & S.</i>	6 <i>Trimeria, Harv.</i>
<i>lucida, Harv.</i>	AB. <i>alnifolia, Planch.</i>
3 <i>Scoparia, Schreb.</i>	7 <i>Kiggelaria, Linn.</i>
<i>Ecklonii, Szyz.</i>	A. <i>africana, Linn.</i> BE.
<i>Gerrardi, Harv.</i>	B. <i>Dregeana, Turcz.</i> E.
<i>Mundtii, Arn.</i>	
<i>Zeyheri, Harv.</i>	

ORDER XVIII. PITTOSSOREÆ.

No plants of this Order have any practical value, except that many of them are cultivated for ornament. Our only species is a tree known to the natives as um-Fusamvu, and, like many other species of the genus, has its seeds immersed in a viscid pulp or resin.

Trees or shrubs, seeds lying in viscid resin.

PITTOSSPORUM.

(Ex. UMFUSAMVU.)

1 *Pittosporum*, *Banks.*
viridiflorum, *Sims.* A-F.

ORDER XX. POLYGALEÆ.

Many plants of this Order contain a bitter principle, and some have been used medicinally. Other species, in addition to our *Polygala serpentaria*, have been used as antidote for bites of snakes, but their efficacy is very doubtful. Several species are in cultivation as ornamental plants. Number of species about 400.

Sepals very unequal, the two lateral ones wing-like

POLYGALA.

Sepals subequal

MURALTIA.

LIST OF SPECIES.

1 <i>Polygala</i> , <i>Linn.</i>			
<i>affinis</i> , <i>D.C.</i>		<i>ophiura</i> , <i>Chod.</i>	?
<i>capillaris</i> , <i>E.M.</i>		<i>oppositifolia</i> , <i>Linn.</i>	A.
<i>chloroptera</i> , <i>Chod.</i>	A.	<i>persicariæfolia</i> , <i>D.C.</i>	A-B.
<i>confusa</i> , <i>Macowan.</i>	A-B.	<i>producta</i> , <i>N.E.B.</i>	C.
<i>durbanensis</i> , <i>Chod.</i>	A.	<i>rigens</i> , <i>D.C.</i>	B.
<i>Galpini</i> , <i>Hook.</i>		<i>serpentaria</i> , <i>E. & Z.</i>	B-C.
<i>Gerrardi</i> , <i>Chod.</i>		<i>tenuifolia</i> , <i>Link.</i>	A-D.
<i>hottentotta</i> , <i>Presl.</i>	A-E.	<i>ukambica</i> , <i>Chod.</i>	?
<i>lysimachæfolia</i> , <i>Chod.</i>	A.	<i>virgata</i> , <i>Thb.</i>	A-E.
<i>myrtifolia</i> , <i>Linn.</i>			
<i>natalensis</i> , <i>Chod.</i>		2 <i>Muraltia</i> , <i>Necker.</i>	
<i>neglecta</i> , <i>Macowan.</i>		<i>ecornuta</i> , <i>N.E.B.</i>	E.
<i>Ohlendorfiana</i> , <i>F. & Z.</i>	A-D.	<i>lancifolia</i> , <i>Harv.</i>	BC.
		<i>pilosa</i> , <i>D.C.</i>	B.
		n. sp. (<i>Evans 666</i>).	?

ORDER XXII. CARYOPHYLLEÆ.

An order containing but few useful plants, though some species of *Dianthus*, known popularly as "Carnation, Sweet William, Indian Pink," &c., are favourite garden plants. Number of species more than 800.

(Ex. CHICKWEED; PINK.)

Calyx tubular, 4-5 toothed. Petals clawed.	1
Sepals 4-5, separate to base or nearly so. Petals not clawed	2
1 Calyx bracteate at base.	<i>DIANTHUS.</i>
1 Calyx nude at base.	<i>SILENE.</i>
2 Stipules none. Petals 2-fid. Styles 4-5.	<i>CERASTIUM.</i>
2 Stipules none. Petals 2-fid. Styles 3.	<i>STELLARIA.</i>

2 Stipules present. Stamens 5, or fewer	3
2 Stipules present. Stamens 5 to 10. Petals ovate, entire, shortly clawed.	SPERGULA.
3 Petals 2-4 fid.	DRYMARIA.
3 Petals entire, or 2-dentate. Sepals not keeled.	POLYCARPÆA.
3 Petals entire or emarginate. Sepals sharply keeled.	POLYCARPON.

LIST OF SPECIES.

1 <i>Dianthus</i> , <i>Linn.</i>		4 <i>Stellaria</i> , <i>Linn.</i>	
<i>prostratus</i> , <i>Jacq.</i>	AB.	<i>media</i> , <i>Villars.</i>	A.
<i>scaber</i> , <i>Thb.</i>	?		
2 <i>Silene</i> , <i>Linn.</i>		5 <i>Spergula</i> , <i>Linn.</i>	
<i>Burchellii</i> , <i>Ott.</i>	B.	<i>arvensis</i> , <i>L.</i>	B.
„ var. <i>latifolia</i> , <i>Sond.</i>	B.	6 <i>Drymaria</i> , <i>Willd.</i>	
<i>Capensis</i> , <i>Ott.</i>	D.	<i>cordata</i> , <i>Willd.</i>	B.
<i>gallica</i> , <i>Linn.</i>	A.		
<i>Thunbergiana</i> , <i>E. & Z.</i>	B.	7 <i>Polycarpœa</i> , <i>Linn.</i>	
3 <i>Cerastium</i> , <i>Linn.</i>		<i>corymbosa</i> , <i>Lam.</i>	A.
<i>Dregeanum</i> , <i>Fenzl.</i>	B.	8 <i>Polycarpon</i> , <i>Linn.</i>	
		<i>tetraphyllum</i> , <i>L.</i>	BD.

ORDER XXIII. PORTULACEÆ.

A small Order containing but few useful plants. The common "Purslane" is well known, and has become an almost cosmopolitan weed. The South African *Portulacaria afra* has been recommended as food for herbivorous animals, and plants of it have been exported from Cape Colony to several places for trial. It is known as "Spekboom." Number of species about 125.

(Ex. PURSLANE; SPEKBOOM.)

Capsules half inferior, many seeded, opening transversely.	PORTULACA.
Capsules 3 valved, splitting longitudinally. Seeds wingless.	TALINUM.
Capsules 3 winged, indehiscent 1 seeded.	PORTULACARIA.

LIST OF SPECIES.

1 <i>Portulaca</i> , <i>Linn.</i>		2 <i>Portulacaria</i> , <i>Jacq.</i>	
<i>oleracea</i> , <i>Linn.</i>	AB.	<i>afra</i> , <i>Jacq.</i>	AB.
<i>pilosa</i> , <i>Linn.</i>	?		
<i>quadrifida</i> , <i>L.</i>	Z.	3 <i>Talinum</i> , <i>Adans.</i>	
		<i>caffrum</i> , <i>E. & Z.</i>	AB.

ORDER XXVI. HYPERICINEÆ.

Herbaceous or half shrubby plants, natives of temperate climates. Their leaves, petals, and sepals have usually a number of dark-coloured glands, which contain a bitter, resinous juice, and some of the species have been used medicinally. *Hypericum* is our only genus. Number of species about 210.

Herbs or shrubs with yellow flowers, which are black dotted. HYPERICUM.

(Ex. INSUKUBILI.)

1 <i>Hypericum</i> , <i>Linn.</i>			
æthiopicum.	AD.	lanceolatum, <i>Lam.</i>	B.
Lalandii, <i>Choisy.</i>	AB.	natalensis, <i>Wood & Evans.</i>	1.

ORDER XXVII. GUTTIFERÆ.

A tropical or sub-tropical Order. The two best-known plants belonging to it are probably *Garcinia mangostana*, which bears a delicious fruit, the "Mangosteen," and *G. morella*, which yields the "Gamboge" of commerce. An acrid yellowish or greenish juice which flows from the stem and branches is collected, and when inspissated forms the "Gamboge." Several other species yield the pigment, but of inferior quality. Our species is peculiar to South Africa, and is of no special value. Number of species about 230.

(Ex. MANGOSTEEN.)

1 <i>Garcinia</i> , <i>Linn.</i>		
Gerrardi, <i>Harv.</i>		B.

ORDER XXXI. MALVACEÆ.

A large Order, including many well-known plants, such as "Gossypium spp." yielding Cotton, *Adansonia digitata*, the "Baobab," and many others. Most of the species abound in mucilage, and are sometimes employed in making refreshing drinks, thickening soups, &c. A large number of the species are very ornamental, and some of them are found in most gardens. Number of species about 700.

(Ex. HIBISCUS, UMVEMVANI.)

Carpels separable at maturity. Stigmas as many as carpels		
Anthers at or near summit of column.		1
Carpels separable. Stigmas twice as many as carpels. Anthers on outer surface of column; apex with none.		3
Carpels united. Stigmas as many as carpels.		4
1 Style filiform. Involucel of 3 bracteoles.	MALVA.	
1 Styles capitellate. Involucel present.	MALVASTRUM.	
1 Styles capitellate. Calyx nude at base.		2
2 Ovules solitary in carpels.	SIDA.	
2 Ovules 3 or more in each carpel.	ABUTILON.	
2 Ovules 2-3 in each carpel. Bracteoles 3.	SPHÆRALCEA.	
3 Involucel of 5-20 bracteoles.	PAVONIA.	
4 Ovary 5-celled. Stigmas capitate.	HIBISCUS.	
4 Ovary 5-celled. Stigmas club-shaped, 5-furrowed.	THESPESIA.	
4 Ovary 3-4-celled. Stigmas 3-4, furrowed or lobed.	FUGOSIA.	

LIST OF SPECIES.

1 <i>Malva</i> , <i>Linn.</i> <i>parviflora</i> , <i>Linn.</i>		7 <i>Thespesia</i> , <i>Cav.</i> <i>Rehmanni</i> , <i>Szysz.</i>	D.
2 <i>Malvastrum</i> , <i>A. Gray.</i> <i>capense</i> , <i>Gray & Harv.</i>	B	8 <i>Hibiscus</i> , <i>Linn.</i> <i>aethiopicus</i> , <i>Linn.</i> <i>atromarginatus</i> , <i>E & Z.</i> <i>calycinus</i> , <i>Willd.</i> <i>cannabinus</i> , <i>Linn.</i> <i>diversifolius</i> , <i>Jacq.</i> <i>furcatus</i> , <i>Roxb.</i> <i>gossypinus</i> , <i>Thb.</i> <i>leiospermus</i> , <i>Harv.</i> <i>leptocalyx</i> , <i>Sond (G & McK. 1)</i> ? <i>malacospermus</i> , <i>E.M.</i> <i>micranthus</i> , <i>Linn.</i> <i>natalitius</i> , <i>Harv.</i> <i>pedunculatus</i> , <i>Cav.</i> <i>physaloides</i> , <i>G. & P.</i> <i>physodes</i> , <i>E.M.</i> <i>pusillus</i> , <i>Thb.</i> <i>ricinifolius</i> , <i>E.M.</i> <i>saxatilis</i> , <i>W. & E.</i> <i>surattensis</i> , <i>Linn</i> <i>tiliaceus</i> , <i>Linn</i> <i>trionum</i> , <i>Linn.</i> ,, <i>var. hastæfolius</i> .	B. D. A. AB. AB. A. AB.
3 <i>Sida</i> , <i>Linn.</i> <i>carpinifolia</i> , <i>Linn.</i> <i>cordifolia</i> , <i>Linn.</i> <i>longipes</i> , <i>E.M.</i> <i>rhombifolia</i> , <i>Linn.</i> <i>spinosa</i> , <i>Linn.</i> <i>triloba</i> , <i>Cav.</i>	A. B. B. AB. A. AB.		AB. AB. A. AB. A. C. C. B. AB. A. E. BC. B. E. AB. A. A-C.
4 <i>Abutilon</i> , <i>Gaert.</i> <i>indicum</i> , <i>G. Don.</i> <i>Sonneratianum</i> , <i>Cav.</i>	A. A.		
5 <i>Sphæralcea</i> , <i>St. Hill.</i> <i>pannosa</i> , <i>Bolus</i>	D-F.		
6 <i>Pavonia</i> , <i>Cav.</i> <i>columella</i> , <i>Cav.</i> <i>Dregei</i> , <i>Gurke.</i> <i>Kraussiana</i> , <i>Hochst.</i> <i>macrophylla</i> , <i>E.M.</i> <i>odorata</i> , <i>Willd.</i> <i>urens</i> , <i>Cav</i>	A. AB. A. A.		
			BC.
		9 <i>Fugosia</i> , <i>Juss.</i> <i>Gerrardi</i> , <i>Harv.</i>	BC.

ORDER XXXII. STERCULIACEÆ.

The members of this Order, like the last, contain an abundance of mucilage, and in some species the bark is fibrous. The most important members of the family are *Theobroma cacao*, whose seeds yield chocolate and cocoa, and *Cola acuminata*, the seeds of which trees have, within the last few years, come much into notice. None of our species have any economic value so far as at present known. Number of species more than 500.

(Ex. COLA.)

Flowers bisexual. Staminodia present.	1
Flowers bisexual. No staminodia.	2
Flowers unisexual or polygamous A tree.	COLA.
1 Bracts deciduous. Fertile stamens 2-3 opposite each petal.	DOMBEYA.
1 Bracts persistent. Fertile stamens 5.	MELHANIA.
2 Ovary 1 celled, unequal sided. Style lateral.	WALTHERIA.
2 Ovary 5 celled, many seeded. Style central.	3

3 Filaments broadly linear, oblong, or obovate.
3 Filaments abruptly dilated in the middle.

HERMANNIA.
MAHERNIA.

LIST OF SPECIES.

1 <i>Cola</i> , Schott. <i>natalensis</i> , Oliv.	transvaalensis, Schinz.	?	
AB.	Woodii, Schinz. N. Sp. (Evans 654.)	D-E. F.	
2 <i>Dombeya</i> , Cav. <i>Burgessiae</i> , Gerr. <i>cymosa</i> , Harv. <i>Dregeana</i> , Sond. <i>natalensis</i> , Sond. <i>rotundifolia</i> , Harv.	DE. A. A-C. B.	5 <i>Mahernia</i> , Linn. auricoma, Szysz. betonicæfolia, E. & Z. bipinnata, Linn. chrysantha, Planch. cococarpa, E. & Z. erodiooides, Burch. gracilis, Harv. grandistipula, Burch. Macowani, Szysz. malvæfolia, N.E.B.	C. DE. ? DE. DE. DE. DE. DE. DE. DE. DE. D. BC. DE. DE. BC. Z. C. D.
3 <i>Melhania</i> , Forsk. <i>didyma</i> , E. & Z. <i>prostrata</i> , D.C.	C. ?	6 <i>Waltheria</i> , Linn. indica, Linn.	AB.
4 <i>Hermannia</i> , Linn. <i>cristata</i> , Bolus. <i>depressa</i> , N.E.B. <i>Gerrardi</i> , Harv. <i>longifolia</i> , N.E.B. <i>oligosperma</i> , K. Schum. <i>Sandersoni</i> , Harv.	DE. B. C. E. B.	ovalis, Harv. parviflora, E. & Z. veronicæfolia, E. & Z.	C. C. D.

ORDER XXXIII. TILIACEÆ.

An Order which contains many useful plants, such as *Tilia parviflora* and *T. grandifolia*, the European "Limes," *Spermannia africana*, from the bark of which a fibre is obtained and which has been cultivated for this purpose in Cape Colony, *Corchorus olitorius* and *C. capsularis*, which yield the "Jute" of commerce. Other species also contain a fibre in their bark. Some yield a mucilage which has been used for various purposes, while others again have been used medicinally; but none of our species are known to have any commercial value. Number of species about 330.

(Ex. LINDEN.)

Flowers, 4 parted.	SPARMANNIA.
Flowers, 5 parted.	1
1 Fruit fleshy, of 1-4 hard-shelled drupes.	GREWIA.
1 Capsule globose, covered with sharp bristles.	TRIUMFETTA.
1 Capsule pod-like, 2-5 valved, many seeded.	CORCHORUS.

LIST OF SPECIES.

1 <i>Grewia</i> , Linn. <i>angolensis</i> , Welw. <i>caffra</i> , Meisn.	2 <i>Spermannia</i> . palmata, E.M.	B-F.
A-E.		

Grewia, <i>Continued.</i>			
flava, <i>D.C.</i>	C.	pilosa, <i>Roth.</i>	A.
hispida, <i>Harv.</i>	CE.	rhomboidea, <i>Jacq.</i>	A.
lasiocarpa, <i>E.M.</i>	AB.	trichocarpa, <i>Sond.</i>	Z.
megalocarpa, <i>P. de B.</i>	CD.	sp. (Gerrard 649).	A.
occidentalis, <i>Linn.</i>	AB.		
3 <i>Triumfetta</i> , <i>Linn.</i>		4 <i>Ochororus</i> , <i>Linn.</i>	
annua, <i>Linn.</i>	A-C.	asplenifolius, <i>Burch.</i>	AE.
effusa, <i>E.M.</i>	AB.	serræfolius, <i>Burch.</i>	
		trilocularis, <i>Linn.</i>	CA.

ORDER XXXIV. LINEÆ.

The only species of the family which has much commercial value is the common "Flax," *Linum usitatissimum*, which is indigenous in the South of Europe, and cultivated in many countries, and, as is well known, the seeds yield "Linseed" oil. Some of the species have been used medicinally, and many are cultivated as ornamental plants.

Number of species about 135.

(Ex. FLAX.)

Stamens as many as petals. Herbs.		LINUM.
Stamens twice as many as petals. Shrubs.		ERYTHROXYLON.

LIST OF SPECIES.

1 <i>Linum</i> , <i>Linn.</i>		2 <i>Erthroxylon</i>	
<i>Thunbergii</i> , <i>E. & Z.</i>	B.	emarginatum, <i>Thonn</i>	AB.
		monogynum, <i>Roxb.</i>	B.
		pictum, <i>E.M.</i>	AB.

ORDER XXXVI. MALPIGHIACEÆ.

Tropical or subtropical plants, not having any special economic value.

Number of species nearly 600.

(Ex. UMABOPE.)

Flowers racemose, large, yellow.		ACRIDOCARPUS.
Flowers umbellate, smaller, yellow.		SPHEDAMNOCARPUS.

LIST OF SPECIES.

1 <i>Acridocarpus</i> , <i>Guill & Per.</i>		2 <i>Sphedamnocarpus</i> , <i>Planch.</i>	
<i>natalitus</i> , <i>Juss.</i>	AB.	galphimiæfolius, <i>A. Juss.</i>	A.
		pruriens, <i>A. Juss.</i>	AB.

ORDER XXXVII. ZYGOPHYLLEÆ.

Perhaps the most useful plant of this Order is *Guaiacum officinale*, the wood of which is known as "Lignum vitae," and a resinous juice obtained from the same species has been used medicinally. Our only species is a noxious weed. Number of species about 100.

Weed-like diffuse prostrate herbs, with opposite leaves.

TRIBULUS.

1 *Tribulus*, *Linn.**terrestris*, *Linn.*

B-D.

ORDER XXXVIII. GERANIACEÆ.

The members of this family are chiefly ornamental and are largely cultivated in gardens; but the Monsonias, and one or two species of Pelargonium have a wide reputation in South Africa as remedies in dysentery. The genera Pelargonium and Oxalis abound in South Africa, though not many are found in Natal, while the Monsonias are confined to the African continent. Number of species about 750.

Flowers regular. 1

Flowers irregular. 2

1 Stamens 10, connate at base; leaves trifoliolate.

OXALIS.

1 Stamens 10, monadelphous.

GERANIUM.

1 Stamens 15, in parcels of three each.

MONSONIA.

2 Stamens 10 or fewer; 2-7 antheriferous.

PELARGONIUM.

2 Stamens 5. Back sepal spurred.

IMPATIENS.

LIST OF SPECIES.

1 *Monsonia*, *Linn.**attenuata*, *Harv.*

DE.

inquinans, *Ait.*

E.

ovata, *Cav.*

B.

lateripes, *L'Herit.*

D.

,, var. *biflora*, *Harv.*

A.

pulverulentum, *Colv.*

B.

2 *Geranium*, *Linn.**caffrum*, *E. & Z.*

DE.

ranunculophyllum, *Baker.*

F.

canescens, *L'Herit.*

B.

robustum, *Kze.*

F.

incanum, *Burm.*

DE.

vitifolium, *Ait.*

B.

ornithopodium, *E. & Z.*

AB.

zonale, *Ait.*

D.

pulchrum, *N.E.B.*

F.

sp. (*J. M. Wood*, 1836).

C.

robustum, *Kze*

E.

sp. (*J. M. Wood*, 4492).

C.

3 *Pelargonium*, *L'Herit.**aconitiphillum*, *E. & Z.*

B-E.

sp. (*Evans*, 645).

E.

alchemilloides, *Willd.*

AB.

bifurca, *Todd.*

?

Bowkeri, *Harv.*

E-F.

convexula, *Jacq.*

?

capitatum, *Ait.*

A.

corniculata, *Linn.*

AB

dispar, *N.E.B.*

F.

pulchella, *Jacq.*

C.

flabellifolium, *Harv.*

BC

semiloba, *Sond.*

B.

grossularoides, *Att.*

A.

var. fl. *pleno*, (*J.M.W.*, 550.)

C.

setosa, *E.M.*

?

Smithiana, *Sond.*

F.

4 *Oxalis*, *Linn.**bifurca*, *Todd.*

?

convexula, *Jacq.*

?

corniculata, *Linn.*

AB

pulchella, *Jacq.*

C.

semiloba, *Sond.*

B.

var. fl. *pleno*, (*J.M.W.*, 550.)

C.

setosa, *E.M.*

?

Smithiana, *Sond.*

F.

5 *Impatiens*, *Linn.**capensis*, *Thb.*

A-F.

ORDER XXXIX. RUTACEÆ.

An order perhaps best known by its including the genus Citrus with its numerous species and varieties. The common Rue which

gives its name to the Order is well known in Europe. The leaves of several species of *Barosma*, natives of Cape Colony, are known as "Buchu" leaves, and are much used in medicine. The fruits of our *Zanthoxylums* contain a pungent oil, and their roots have been used as a remedy for snake bites, and other species of the same genus have been used medicinally in the countries of which they are natives. *Calodendron capense* is one of our most beautiful indigenous flowering trees. It is the only species of its genus and is confined to South Africa.

Number of species about 650.

(Ex. KNOBTHORN.)

Leaves simple. Flowers large, paniculate.	CALODENDRON.
Leaves simple. Flowers small, axillary.	BAROSMA.
Leaves trifoliate. Flowers small.	TODDALIA.
Leaves abruptly pinnate. Stems and branches armed.	ZANTHOXYLUM.
Leaves unequally pinnate. Unarmed.	CLAUSENA.

LIST OF SPECIES.

1 <i>Calodendron, Thb.</i>	4 <i>Clausea, Burm.</i>	
<i>capense, Thb.</i>	<i>inæqualis, Bth.</i>	A-D.
2 <i>Barosma, Willd.</i>	5 <i>Zanthoxylum, Linn.</i>	
<i>lanceolata, Sond.</i>	<i>capense, Harv.</i>	AB.
3 <i>Toddalia, Juss.</i>	<i>Thunbergii, D.C.</i>	A.
<i>lanceolata, Lam.</i>	A.	
<i>natalensis. Sond.</i>	A	

ORDER XLI. OCHNACEÆ.

A small Order of shrubs and trees, confined to tropical and sub-tropical regions. Most of them contain a bitter principle, and some have been used as tonics, &c. The wood of our *O. arborea* is hard and useful, but it is not very common.

(Ex. REDWOOD; UMBOMVANI.)

Trees and shrubs with yellow fragrant flowers, the only genus. OCHNA.

LIST OF SPECIES.

1 <i>Ochna, Schreber.</i>	<i>atropurpurea, D.C.</i>	AB.
<i>arborea, Burch.</i>	<i>„ var. natalitia, Harv.</i>	AB.

ORDER XLII. BURSERACEÆ.

Another tropical Order of trees and shrubs, one only of which reaches Natal, while 8 or 10 others are found in tropical Africa. Many of the foreign species yield a gum or resin which is used in medicine, such as "Olibanum," from *Boswellia thurifera*; *Elemi* from *Canarium*

elemiferum, "Balm of Gilead" from species of *Balsamodendron*, "Bdellium," "Guggur," and "Myrrh" from other species of the same genus. "Carana" from *Icica altissima*. Other gums which are less well known are obtained from different species, and an oil is obtained from the seeds of some of them. Some of the members of the Order are trees from whose trunks large canoes have been made. So far as known our species have no valuable properties. Number of species 145.

Trees with polygamous flowers.

COMMIPHORA

(Ex. UMUMBU.)

LIST OF SPECIES.

1 *Commiphora*, *Jacq.*
caryæfolia, *Oliv.*
Harveyi, *Engl.*

A-B.

A.

ORDER XLIII. MELIACEÆ.

Tropical trees and shrubs, rarely herbaceous. Many of the species have medicinal properties, such as *Melia Azedarach* and *Soymida febrifuga*, natives of India; *Carapa guianensis*, which yields "Crab Oil," and is a native of Tropical America. *Melia Azedarach*, known in South Africa as the "Syringa," is said to have been used medicinally, and its seeds yield an oil. The best known member of the Order is *Swietenia mahogani*, whose timber is the "Mahogany" of commerce. Our *Ekebergia capensis* is popularly known as Essenwood, and *Trichilia emetica* is our handsomest shade tree. Its seeds yield an oil which remains fluid in the summer, but congeals in the winter months. It is frequently, but erroneously, called Essenwood. Number of species 270.

(Ex. SYRINGA; ESSENWOOD.)

Leaves simple. Petals elongate.	TURRÆA.
Leaves pinnate. Fruit a dry splitting capsule.	TRICHILIA.
Leaves pinnate. Fruit fleshy, unopening.	EKEBERGIA.
Leaves bipinnate. Fruit drupaceous.	MELIA.

LIST OF SPECIES.

1 <i>Turræa</i> , <i>Linn.</i> <i>floribunda</i> , <i>Hochst.</i> <i>obtusifolia</i> , <i>Hochst.</i>	AB.	4 <i>Trichilia</i> , <i>Linn.</i> <i>Dregeana</i> , <i>E.M.</i> <i>Ekebergia</i> , <i>E.M.</i> <i>emetica</i> , <i>Vahl.</i> <i>Natalensis</i> , <i>Sond.</i> <i>pterophylla</i> (Cas), <i>D.C.</i>	A. ? A. ? BC.
2 <i>Melia</i> , <i>Linn.</i> <i>Azedarach</i> , <i>Linn.</i>	AB.		
3 <i>Ekebergia</i> , <i>Sparm.</i> <i>capensis</i> , <i>D.C.</i> <i>Meyeri</i> , <i>Presl.</i>	B. AB.		

ORDER XLV. OLACINEÆ.

A small Order inhabiting tropical and sub-tropical countries. None of the species have any important medicinal properties, nor are

they of much economic value. Our *Ximenia caffra*, known to natives and others as um-Tunduluku, bears a sour but eatable fruit, and its seeds contain much oil. *Apodytes dimidiata* is the well-known "White Pear," its wood being extensively used for felloes, &c. Number of species 170.

(Ex. WHITE PEAR ; UMTUNDULUKU.)

Petals 4-5, hairy within. Stamens 8-10.

XIMENIA.

Petals 4-5, glabrous. Stamens 4-5

APODYTES.

Corolla rotate, bearing the stamens

CASSINOPSIS.

Flowers monoecious 4-merous. Climber.

PYRENACANTHAA.

LIST OF SPECIES.

1 *Ximenia*, Linn.
caffra, Sond.

3 *Pyrenacantha*, Hook.
A-C. scandens, Planch.

A.

2 *Apodytes*, E.M.
dimidiata, E.M.

4 *Cassinopsis*, Sond.
A B. capensis, Sond.
timifolia, Harv.

F.

B.

ORDER XLVI. ILICINEÆ.

The best known species of this order are the common "Holly" (*Ilex aquifolium*) and *Ilex paraguayensis*, the "Mate" of South America, where it is extensively used as we use tea. It is used in large quantities by the natives of Paraguay, and is credited with stimulating properties, but has not found much favour with Europeans.

Number of species about 150.

Trees with alternate coriaceous leaves and white flowers.

ILEX.

1 *Ilex*, Linn.
capensis, Harv. & Sond. E.

ORDER XLVII. CELASTRINEÆ.

Some species of this Order have been used medicinally, but none of them are of much value. All of our species are trees and shrubs and are of no economic value.

Number of species more than 400.

(Ex. SAFFRHOUT ; CAPE BOX.)

Stamens 3.

SALACIA.

1.

Stamens 4-5.

CASSINE.

1.

1 Ovules pendulous from apex of cell.

PUTTERLICHIA.

2.

1 Ovules erect, 6 in each cell.

PLEUROSTYLVIA.

2.

1 Ovules erect, 4-5 in each cell.

CELASTRUS.

3.

1 Ovules 2 in each cell.

PTEROCELASTRUS.

3.

2 Ovary free. Seeds arillate.

ELAEODENDRON.

3.

2 Ovary confluent with disk.

LIST OF SPECIES.

1 <i>Pleurostylia</i> , <i>W. & A.</i>		4 <i>Pterocelastrus</i> , <i>Meisn.</i>	
capense, <i>Turcz.</i>	E.	echinatus, <i>N.E.B.</i>	Z.
2 <i>Cassine</i> , <i>Linn.</i>		rostratus, <i>Walp.</i>	Z.
albanensis, <i>Sond.</i>	?	variabilis, <i>Sond.</i>	
capensis, <i>Linn.</i>	B.		
3 <i>Oelastrus</i> , <i>Linn.</i>		5 <i>Putterlickia</i> , <i>Endl.</i>	
acuminatus, <i>Linn.</i>	BC.	verrucosa, <i>E.M.</i>	AB.
albatus, <i>N.E.B.</i>	F.Z.		
angularis, <i>Sond.</i>	A.B.	6 <i>Elæodendron</i> , <i>Jacq.</i>	AB.
buxifolius, <i>Linn.</i>	A.B.	capense, <i>E. & Z.</i>	Z.
concinnus, <i>N.E.B.</i>	D.	celastroides, <i>Harv.</i>	E.
cordata, <i>E.M.</i>	A.	croceum, <i>D.C.</i>	A.
laurinus, <i>Thb.</i>	?	laurifolium, <i>Harv.</i>	AB.
nemorosus, <i>E. & Z.</i>	?	velutinum, <i>Harv.</i>	
peduncularis, <i>Sond.</i>	AB.	sp. (<i>Mystroxylon</i> , <i>eucleæ-</i>	Z.
polyacanthos, <i>Sond.</i>	?	<i>forme</i> , <i>E. & Z.</i>)	
procumbens, <i>Linn.</i>	A.	7 <i>Salacia</i> , <i>Linn.</i>	AB.
Rehmanni, <i>Szysz.</i>	C.	alternifolia, <i>Hochst.</i>	?
ruber, <i>Harv.</i>	B.	Gerrardi, <i>Harv.</i>	
undatus, <i>Thb.</i>	D.		
Woodii, <i>Szysz.</i>	B.		

ORDER XLIX. RHAMNEÆ.

The best known genera of this family are *Rhamnus* and *Zizyphus*. One or more species of *Rhamnus* have purgative properties, and are used medicinally, as Syrup of Buckthorn. Other species yield dyes, which are, however, but little used. The fruits of several species of *Zizyphus* are eatable, and the fruits and bark of some other members of the Order have been, and perhaps are, still used medicinally. None of our species have any special value.

Number of species about 430.

(Ex. BUFFELSDOORN.)

Ovary quite free.	1.
Ovary more or less adherent to calyx tube	2.
1 Styles 2-9. Tree with hooked spines.	<i>ZIZYPHUS.</i>
1 Style simple. Spiny shrub.	<i>SCUTIA.</i>
1 Style simple. Shrub not spiny.	<i>NOLTEA.</i>
1 Styles 3-4. Disk thin, lining calyx tube.	<i>RHAMNUS.</i>
2 A climbing shrub.	<i>HELINUS.</i>
2 An erect shrub or small tree.	<i>PHYLICA.</i>

LIST OF SPECIES.

1 <i>Zizyphus</i> , <i>Juss.</i>		4 <i>Phyllica</i> , <i>Linn.</i>	
<i>mucronata</i> , <i>Willd.</i>	AB.	<i>oleoides</i> , <i>D.C.</i>	?
„ <i>var. glabrata</i> .	BC.	<i>paniculata</i> , <i>Willd.</i>	A-D.
„ <i>var. pubescens</i> .	C.		
2 <i>Rhamnus</i> , <i>Linn.</i>		5 <i>Noltea</i> , <i>Reich.</i>	
<i>prinoides</i> , <i>L'Herit.</i>	CD.	<i>africana</i> , <i>Reich.</i>	?
3 <i>Scutia</i> , <i>Comm.</i>		6 <i>Helinus</i> , <i>E.M.</i>	
<i>Commersonii</i> , <i>Brogn.</i>	A.	<i>ovata</i> , <i>E.M.</i>	A.E.

ORDER L. AMPELIDEÆ.

An Order containing three genera only, the most notable of which is *Vitis*, to which genus the Grape Vine (*Vitis vinifera*) belongs. Several species of American grape vine are in cultivation, one of them known here as the "Catawba" is really the "Isabella," of which there are many varieties. The fruit of at least two of our species, viz., *V. capensis* and *V. rhomboidea* are eatable, and sometimes used as preserves. Some of the other species might also be found to be useful.

Number of species about 250.

(Ex. GRAPE VINE.)

LIST OF SPECIES.

1 <i>Vitis</i> , <i>Linn.</i>		<i>lanigera</i> , <i>Harv.</i>	A.
<i>capensis</i> , <i>Thb.</i>	B.	<i>natalitia</i> , <i>Szysz.</i>	BC.
„ <i>var. Dregeana</i> .	AB.	<i>orientalis</i> (<i>C. orientalis</i> , <i>Lam.</i>)	A.
<i>cirrhosa</i> , <i>Thb.</i>	A-D.	<i>quadrangularis</i> , <i>Linn.</i>	Z.
<i>cuneifolia</i> (<i>Cissus cunei-</i> <i>folia</i> , <i>E. & Z.</i>)	A-D	<i>repando-spinulosa</i> , <i>Kuntz.</i>	
<i>cussonioides</i> , <i>Schinz.</i>	D-E.	<i>rhomboidea</i> (<i>Cissus rhom-</i> <i>boidea</i> , <i>E.M.</i>)	A-C.
<i>fragilis</i> , <i>E.M.</i>	AB.	<i>semiglabra</i> , <i>Sond.</i>	?
<i>gracilis</i> , <i>Baker.</i>	Z	<i>tetragona</i> , <i>Harv</i>	?
<i>humilis</i> , <i>N.E.B.</i>	D.	<i>Thunbergii</i> , <i>E. & Z.</i>	A-D.
<i>hypoleuca</i> , <i>Harv.</i>	A.		

ORDER LI. SAPINDACEÆ.

Some of the members of this Order bear eatable fruits, such as the "Litchi" and the "Longaan" and others. The most useful of our Natal species is *Pteroxylon utile*, the "Sneezewood" *Hippobromus alatus* also yields timber which has been used; but the tree is too small to be of much value. *Greyia Sutherlandi* is a handsome flowering tree of the upper districts, and is sometimes known as the "Natal Bottle Brush."

Number of species 6-700.

(Ex. SNEEZEWOOD; UMTATI.)

Fruit fleshy or drupaceous.	1.
Fruit capsular	2.
1 Flowers 4 parted. Ovary 2 lobed. Fruit dicoccosus	SCHMIDELIA.
1 Flowers 5 parted. Ovary 3-4 celled. Fruit tricoccosus.	SAPINDUS.
1 Flowers 5 parted. Ovary entire. Fruit drupaceous.	HIPPOBROMUS.
1 Flowers 5 parted. Ovary 4 angled, 4 celled	BERSAMA.
2 Ovary compressed. Seeds winged.	PTEROXYLON.
2 Flowers without petals. Capsule winged.	DODONÆA.
2 Flowers bisexual or polygamo-dioecious. Capsule not winged.	BERSAMA.
2 Flowers bisexual. Capsule 5-lobed; seeds minute.	GREYIA.
2 Flowers bisexual. Capsule 4-lobed.	MELIANTHUS.
2 Flowers polygamo-dioecious. Capsule bladderry. A climber.	CARDIOSPERMUM.

LIST OF SPECIES.

1 <i>Cardiospermum</i> , <i>Linn.</i> <i>halicacabum</i> , <i>Linn.</i>	B.	5 <i>Dodonæa</i> , <i>Linn.</i> <i>viscosa</i> , <i>Linn.</i>	A.
2 <i>Schmidelia</i> , <i>Linn.</i> <i>decipiens</i> , <i>Arn.</i>	A.	6 <i>Pteroxylon</i> , <i>E. & Z.</i> <i>utille</i> , <i>E. & Z.</i>	D.
<i>erosa</i> , <i>Arn.</i>	A.		
<i>melanocarpa</i> , <i>Arn.</i>	AB.	7 <i>Melianthus</i> , <i>Linn.</i>	?
<i>monophylla</i> , <i>Presl.</i>	B-F.	<i>insignis</i> , <i>O. Kuntz.</i>	C-D.
<i>natalensis</i> , <i>Sond.</i>	A.	<i>villosum</i> , <i>Bolus.</i>	
<i>Rehmanniana</i> , <i>Szyz.</i>	A.		
3 <i>Hippobromus</i> , <i>E. & Z.</i> <i>alatus</i> , <i>E. & Z.</i>	A-D.	8 <i>Bersama</i> , <i>Fresen.</i> <i>abyssinica</i> , <i>Fresen.</i>	?
		<i>lucens</i> , <i>Szyz.</i>	B.
4 <i>Sapindus</i> , <i>Linn.</i> <i>oblongifolius</i> , <i>Sond.</i>	A.	9 <i>Greyia</i> , <i>Hook & Arn.</i> <i>Sutherlandi</i> , <i>H. & H.</i>	C-E.

ORDER LIII. ANACARDIACEÆ.

An Order which is most plentiful in tropical and semitropical countries. It includes many useful plants, such as *Rhus coriaria*, the "Varnish" tree, *R. cotinus* yielding a valuable dye, while *R. toxicodendron*, the "Poison Ivy" of America, is used medicinally. It is, however, poisonous, and merely handling the leaves often causes unpleasant after effects. *R. vernix* is supposed to yield the varnish, and *R. succedanea* the vegetable wax of Japan. Several species of other genera also yield a varnish. The well-known Mango (*Mangifera indica*) belongs to this Order, also *Anacardium occidentale*, the "Cashew" nut, while several species of *Spondias* bear eatable fruits. None of our indigenous species have much, if any, economic value.

Number of species about 450.

(Ex. UMGANO; UMGWENYA; WILD PLUM.)

Ovary 1 celled, with 1 ovule.	1.	
Ovary 2-5 celled, ovules 1 in each cell.	4.	
1 Stamens 8. Sepals and petals 4.	ODINA.	
1 Stamens 4-5. Calyx unchanged in fruit.	2.	
1 Stamens 5. Calyx in fruit enlarged and coloured.	LOXOSTYLIS.	
2 Drupe compressed, wingless	Leaves trifoliolate.	RHUS.
2 Drupe compressed, wingless.	Leaves simple.	PROTORHUS.
2 Fruit compressed, winged.		SMODINGIUM.
4 Staminal flowers spicate. Stamens 12-15 or more.	SCLEROGRARYA.	

LIST OF SPECIES.

1 <i>Rhus</i> , <i>Linn.</i>		<i>villosa</i> , <i>Lf.</i>	B.
<i>crenata</i> , <i>Thb.</i>	B.	" <i>var. gracilis</i> , <i>Engl.</i>	C-E.
<i>cuneata</i> , <i>N.E B.</i>	C.	<i>viminalis</i> , <i>Vahl.</i>	D.
<i>dentata</i> , <i>Thb.</i>	BC.	<i>Zeyheri</i> , <i>Sond.</i>	D-F.
<i>discolor</i> , <i>E.M.</i>	D.	n. sp. (<i>Wood</i> 3002)	B.
<i>excisa</i> , <i>Thb.</i>	DE.		
<i>Gerrardi</i> , <i>Harv.</i>	D.	2 <i>Loxostylis</i> , <i>Spr.</i>	
<i>grandifolia</i> , <i>Engl.</i>	B.	<i>alata</i> , <i>Spr.</i>	A.
<i>Gueinzii</i> , <i>Sond.</i>	?		
<i>laevigata</i> , <i>Linn.</i>	AB.	3 <i>Smodingium</i> , <i>E.M.</i>	
<i>lucida</i> , <i>Linn.</i>	B.	<i>argutum</i> , <i>Sond.</i>	B.
<i>natalensis</i> , <i>Bernh.</i>	A.		
<i>obovata</i> , <i>Sond.</i>	B.	4 <i>Protorhus</i> , <i>Engl.</i>	
<i>parvifolia</i> , <i>Harv.</i>	B.	<i>longifolia</i> , <i>Engl.</i>	A-B.
<i>Pentheri</i> , <i>Zahlbr.</i>	?	sp. (<i>Wood</i> 9300).	B.
<i>puberula</i> , <i>E. & Z.</i>	C.		
<i>pyroides</i> , <i>Burch.</i>	?	5 <i>Odina</i> , <i>Roxb.</i>	
<i>refracta</i> , <i>E. & Z.</i>	DE.	<i>caffra</i> , <i>Hook.</i>	A.
<i>Rehmanniana</i> , <i>Szysz.</i>	D.	<i>edulis</i> , <i>Sond.</i>	B.
<i>rupicola</i> , <i>W. & E.</i>	D.		
<i>Sonderi</i> , <i>Engl.</i>	E.	6 <i>Sclerocarya</i> , <i>Hochst.</i>	
<i>tridentata</i> , <i>Sond.</i>	B.	<i>caffra</i> , <i>Sond.</i>	B.

ORDER LVI. CONNARACEÆ.

An order of tropical plants some of which yield valuable timber such as the "Zebra wood" of Guiana (*Connarus Lambertii*). The seeds of another tree, *U. speciosus*, yield an oil, but our only species is a small shrub of no economic value. Number of species 140.

Calyx 5 cleft or parted. Petals 5. Stamens 10.

CNESTIS.

1 Onestis. Juss.

natalensis, *Pl.* & *Soni*.

A B

ORDER LVII. LEGUMINOSÆ.

In number of species this Order comes next to Compositæ, which is the largest Order in the Vegetable Kingdom. Our members of Leguminosæ vary in size from such plants as *Argyrolobium nanum* and others which are scarcely discernible in the grass amongst which they grow to *Albizzia fastigiata*, the "Flatercrown" which is one of our largest coast trees. The uses to which members of this Family are applied are too numerous for enumeration here, but I may say that amongst our indigenous plants, some, such as the *Medicago*, *Trifolium*, and others are good for grazing purposes. Some of our species of *Indigofera* yield Indigo, and one is cultivated for that purpose in other countries. The *Millettias* are trees whose wood is much esteemed, *M. caffra* being better known as "Umzimbiti". *Sutherlandia frutescens* has been extolled as a remedy for cancer, and the wood of *Albizzia fastigiata* is much used in wagon work. Number of species more than 6500.

(EX. PEA, BEAN, KAFIR BOOM)

KEY TO SUB-ORDERS.

A.—PAPILIONACEÆ.

Corolla papilionaceous. Petals imbricate in aestivation, the upper exterior. Stamens 10

B.—CÆSALPINEÆ.

Corolla irregular or sub-regular. Upper petal interior in aestivation. Stamens 10 or fewer.

C.—MIMOSÆ.

Flowers minute, in dense heads or spikes. Corolla valvate in aestivation.

KEY TO TRIBES.

A.—PAPILIONACEÆ.

Leaves simple. Stamens free. Legumes turgid.

PODALYRIEÆ.

Leaves simple or digitate. Leaflets entire. Racemes terminal or opposite the leaves, or solitary, or fascicled in the axils. Stamens 10, monadelphous. or diadelphous.

GENISTÆ.

Herbs. Leaves trifoliolate. Stamens monadelphous.

TRIFOLIEÆ.

Stipules small

Undershrubs. Stipules in pairs, similar to the leaves.

LOTEÆ.

Legume not jointed

Herbs, not climbing. Shrubs or trees. Leaves pinnate or simple. Stamens diadelphous, or vexillary stamen free at base. Legume 2-valved, not jointed.

GALEGEÆ.

Legume jointed. Habit of Loteæ, Galegeæ, and Phaseoleæ.

HEDYSAREÆ.

Leaves abruptly pinnate. Stamens and legume as in Phaseoleæ.

VICEÆ.

Climbing herbs, shrubs, or rarely trees. Leaves pinnate or pinnately trifoliate, leaflets entire. Stamens monadelphous or diadelphous. Legume 2-valved.

PHASEOLEÆ

Trees or shrubs. Leaves pinnate. Stamens monadelphous. Legume indehiscent.

DALBERGIEÆ.

Trees or shrubs. Leaves unequally pinnate or unifoliate. Stamens free.

SOPHOREÆ.

KEY TO GENERA.

PODALYRIEÆ.

Leaves tomentose, peduncles few flowered. Flowers pink or purple.

PODALYRIA.

GENISTÆ.

Staminal tube entire.

ARGYROLOBIUM.

Staminal tube split above.

RAFNIA.

Leaves simple. Calyx lobes subequal or 2 upper broadest.

LOTONONIS.

Leaves digitate. Calyx lobes 4, upper ones connate, lower narrower. Carina incurved.

LEBECKIA.

Leaves simple or filiform. Legume flat, linear.

CROTALARIA.

Leaves simple or trifoliate. Legume turgid, its valves convex.

BUCHENRŒDERA.

Leaves trifoliate. Legume obliquely ovate.

MELOLOBIUM.

Leaves trifoliate. Legume linear, compressed, glandular.

DICHILUS.

Leaves trifoliate. Legume linear, compressed, not glandular.

ASPALATHUS.

Leaves simple, entire, sessile, usually linear.

Legume ovate sub lanceolate, or compressed.

TRIFOLIEÆ.

Legume small, enclosed in calyx.

TRIFOLIUM.

Legume spirally twisted.

MEDICAGO.

LOTEÆ.

A low slender branching shrublet. Flowers white or yellow.

LOTUS.

GALEGEÆ.

Undershrubs, glandular. Legume 1-seeded.

PSORALEA.

Undershrubs, not glandular. Legume several seeded.

INDIGOFERA.

Connective glandular at apex.

TEPHROSIA.

Herbs or shrubs. Legumes linear, compressed, many seeded.

MUNDULEA.

Shrubs. Legumes linear, compressed, many seeded. Filaments dilated at apex.

MILLETTIA.

Trees. Flowers purple. Legumes broad, woody, densely velvety, or glabrous.

SESBANIA.

Undershrubs. Flowers yellow. Legumes cylindrical, elongate.

SUTHERLANDIA.

Undershrubs. Flowers scarlet. Legumes membranous, inflated. Vexillum shorter than carina.

LESSERTIA.

Undershrubs. Flowers pink to pale purple. Legume compressed or inflated. Vexillum longer than carina.

ASTRAGALUS.

Undershrubs. Stipules oblong, semicordate. Legume bilocular.

HEDYSAREÆ.

Legume jointed.

1

PSEUDARTHRIA.

Legume not jointed.

ARACHIS.

Legume ripening underground.

ÆSCHYNOMENE.

1 Anthers uniform. Legumes stipitate. Stamens 5-5.

SMITHIA.

1 Anthers uniform. Legumes plicate, retracted within the calyx.

ALYSICARPUS.

1 Anthers uniform. Calyx glumaceous, 4-parted. Stamens diadelphous 9-1.

DESMODIUM

1 Anthers dissimilar, 5 basifixed, 5 versatile.

ZORNIA.

Leaflets 2-4, digitate.

STYLOSANTHES.

1 Anthers dissimilar, 5 basifixed, 5 versatile.

Leaflets pinnate, 3-foliolate.

VICEÆ.

Stamens 10. Flowers solitary or in pairs.

VICIA.

Stamens 9. Flowers racemose, racemes several flowered.

ABRUS.

PHASEOLEÆ.

Leaves trifoliolate. Ovary more than 2-ovuled.	1
Leaves trifoliolate, unifoliolate or pinnate. Ovary 2-ovuled.	2
2 Seed cord subcentral.	RHYNCHOSIA.
2 Seed cord attached at one end of a linear hilum. Legume compressed.	ERIOSEMA.
2 Seed cord attached at one end of a linear hilum. Legume turged.	FLEMINGIA.
1 Calyx tubular, obliquely truncate. Stamens uniform. Climbers.	DUMASIA.
1 Calyx tubular, or spathaceous. Stamens uniform. Trees or shrubs.	ERYTHRINA.
1 Calyx bilabiate, upper lip large, 2-lobed, lower small. Climbers.	CANAVALIA.
1 Calyx bilabiate, lowest lobe longest. Climbers.	PHASEOLUS.
1 Calyx bilabiate. Style with straight point, and truncate or capitate stigmas. Climbers.	DOLICHOS.
1 Calyx 4-5 fid. Style with hooked point and oblique stigma. Pod many seeded.	VIGNA.
1 Calyx 4-5 fid. Pod 1-2 seeded, ripening beneath the ground.	VOANDZELIA.
1 Calyx 4-5 fid, two upper teeth connate. Stigma capitate.	GLYCINE.
1 Calyx 4-5 fid. Alternate anthers small and barren.	TERAMNUS.

DALBERGLÆ.

Rambling or climbing shrubs with white flowers.	DALBERGIA.
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SOPHOREÆ.

Leaves pinnate. Flowers white. Legumes moniliiform.	
Leaves pinnate. Flowers yellow. Legumes flat.	SOPHORA.
Leaves unifoliolate. Flowers yellow and white, scented. Legume flat.	CALPURNIA.

B. CÆSALPINEÆ.

Leaves pinnate.	1
Leaves bipinnate.	2
Leaves simple, 2-lobed.	BAUHINIA.
1 Stamens less than 10 perfect. Anthers opening by terminal pores.	CASSIA.
1 Stamens 10. Anthers splitting.	SCHOTIA.
2 Undershrub covered with resinous glands.	HOFFMANSEGGIA.

C. MIMOSÆ.

Stamens definite. Pollen powdery.		1
Stamens indefinite. Pollen 2-4 masses in each cell.		2
1 Flowers uniform, spicate, sessile. Legume jointed.	ENTADA.	
1 Flowers uniform, racemose, pedicelled. Legume continuous.	ELEPHANTORHIZA.	
1 Flowers of two kinds in the spike, upper perfect, lower neuter.	DICHLOSTACHYS.	
2 Corolla small, tubular. Stamens free.	ACACIA.	
2 Corolla funnel-shaped. Stamens connate in a tube at base.	ALBIZZIA.	

LIST OF SPECIES.

1 Podalyria, Lam.	5 Aspalathus, Linn.	
velutina, <i>Burch.</i>	C. canescens, ? <i>Linn.</i>	C.
2 Rafnia, Thb.	eriphyllea, ? <i>Walp.</i>	C.
sp. (J. M. Wood 3008).	Gerrardi, <i>Bolus.</i>	A-B.
	C. laricifolia, <i>Berg.</i>	B-C.
	spinosa, <i>Linn.</i>	A.
3 Lotononis, D.C.	6 Buchenrödera, E. & Z.	
adpressa, <i>N.E.B.</i>	F. biflora, <i>Bolus.</i>	Z.
calycina, <i>Bth.</i>	C-D. lotononoides, <i>Scott Elliott.</i>	F.
carinata, <i>Bth.</i>	?	?
corymbosa, <i>Bth.</i>	A-F. natalense, <i>Baker.</i>	F.
„ var. (Wood 4253.)	D. sparsiflora, <i>Wood & Evans.</i>	B.
cysticoides, <i>Bth.</i>	B-C. viminea, <i>Presl.</i>	
dichiloides, <i>Sond.</i>	A-C.	
eriantha, <i>Bth.</i>	C.	
foliosa, <i>Bolus.</i>	D-E. alpinum, <i>E. & Z.</i>	D.
grandifolia, <i>Bolus.</i>	F. cernuum, <i>E. & Z.</i>	D.
Haygarthii, <i>N.E.B.</i>	Z. decumbens, <i>Bth.</i>	C.
lanceolata, <i>Bth.</i>	?	CD.
laxa, <i>E. & Z.</i>	D. obcordatum, <i>Harv.</i>	
laxifolia, <i>MacOwan.</i>	?	
malacophylla, <i>Guerck.</i>	?	
montana, <i>Schinz.</i>	F. lebeckioides, <i>D.C.</i>	C.
prostrata, <i>Bth.</i>	stricta, <i>E.M.</i>	E.
Schlechteri, <i>Schinz.</i>	7 Melolobium, E. & Z.	
sessilifolia, <i>Harv.</i>	E. alpinum, <i>E. & Z.</i>	
Woodii, <i>Bolus.</i>	F. cernuum, <i>E. & Z.</i>	
Wylei, <i>Wood.</i>	Z. decumbens, <i>Bth.</i>	
	?	
4 Lebeckia, Thb.	8 Dichilus, D.C.	
macrantha, <i>Harv.</i>	E. lebeckioides, <i>D.C.</i>	
mucronata, <i>Bth.</i>	F. stricta, <i>E.M.</i>	
	9 Crotalaria, Linn.	
	E. Burkeana, <i>Bth.</i>	Z.
	F. capensis, <i>Jacq.</i>	A-B.
	C. distans, <i>Bth.</i>	C.
	D. dura, <i>W. & E.</i>	B.
	E. globifera, <i>E.M.</i>	B.
	F. Grantiana, <i>Harv.</i>	B.
	B. lanceolata, <i>E.M.</i>	B.

Crotalaria, *Continued.*

macrocarpa, <i>E.M.</i>	A.
natalitia, <i>Meisn.</i>	AB.
Saltiana, <i>Andr.</i>	B.
striata, <i>D.C.</i>	B.
10 Argyrolobium, <i>E. & Z.</i>	
Andrewsianum, <i>Steud.</i>	A-C.
" var. helvolum	?
" ,, racemosum.	A.
ascendens, <i>Walp.</i>	AB.
longifolium, <i>Walp.</i>	B.
longipes, <i>N.E.B.</i>	?
marginatum, <i>Bolus.</i>	B.
molle, <i>E. & Z.</i>	?
nanum, <i>Schltr.</i>	F.
reflexum, <i>N.E.B.</i>	Z.
rupestris, <i>Walp.</i>	BC.
Sandersoni, <i>Harv.</i>	B.
speciosum, <i>E. & Z.</i>	D.
stipulaceum, <i>E. & Z.</i>	D.
Sutherlandi, <i>Harv.</i>	C.
tuberousum, <i>E. & Z.</i>	C-E.
uniflorum, <i>Harv.</i>	B.
variopile, <i>N.E.B.</i>	F.
sp. (<i>Lotus amplexicaulis</i> , <i>E.M.</i>)	B.
n. sp. (<i>Wood</i> 3935).	D.

11 Medicago, *Linn.*

denticulata, <i>Willd.</i>	D.
laciniata, <i>All.</i>	D.

12 Trifolium, *Linn.*

africanum, <i>Ser.</i>	B.
Burchellianum, <i>Ser.</i>	AB.

13 Lotus, *Linn.*

discolor, <i>E.M.</i>	AB.
" var. (<i>Wood</i> 3952).	Z.

14 Psoralea, *Linn.*

caffra, <i>E. & Z.</i>	B.
pinnata, <i>Linn.</i>	B.
polysticta, <i>Bth.</i>	C
n. sp. (<i>Evans</i> 654)	C.

15 Indigofera, *Linn.*

alternans, <i>D.C.</i>	Z.
argyræa, <i>E. & Z.</i>	Z.
arrecta, <i>Hochst.</i>	A-C.
cryptantha, <i>Bth.</i>	A.
cylindrica, <i>D.C.</i>	?
dalecoides, <i>Bth.</i>	Z.
denudata, <i>Bth.</i>	Z.
dimidiata, <i>Vogel.</i>	B.
Dregeana, <i>E.M.</i>	A.
endacaphylla, <i>Jacq.</i>	A-B.
eriocarpa, <i>E.M.</i>	B.
Evansii, <i>Schltr.</i>	A-B.
fastigiata, <i>E.M.</i>	Z.
filipes, <i>Bth.</i>	D.
foliosa, <i>E.M.</i>	D.
Gerrardiana, <i>Harv.</i>	D.
grata, <i>E.M.</i>	?
hedyantha, <i>E. & Z.</i>	A-D.
heterotricha, <i>D.C.</i>	Z.
hilaris, <i>E. & Z.</i>	A-B.
hirsuta, <i>Harv.</i>	D-E.
longipes, <i>N.E.B.</i>	A.
micrantha, <i>E.M.</i>	A-B.
natalensis, <i>Bolus.</i>	A-B.
oxytropis, <i>Bth.</i>	?
polycarpa, <i>Bth.</i>	A.
rhytidocarpa, <i>Bth.</i>	D.
rostrata, <i>Bolus.</i>	CD.
rufescens, <i>H.M.</i>	?
sarmentosa, <i>Linn.</i>	?
Schlechteri, <i>Baker f.</i>	?
seticulosa, <i>Harv.</i>	B.
tenuissima, <i>E.M.</i>	F.
tetragonoloba, <i>E.M.</i>	B.
tristis, <i>E.M.</i>	B.
velutina, <i>E.M.</i>	A-B.
vestita, <i>Harv</i>	A.
viminea, <i>E.M.</i>	B.
Woodii, <i>Bolus.</i>	B.
Zeyheri, <i>Spreng.</i>	?
16 Tephrosia, <i>Persoon.</i>	
æmula, <i>E. Mey.</i>	A.
amœna, <i>E.M.</i>	A-Z.
canescens, <i>E.M.</i>	A.
capensis, <i>Pers.</i>	A-C.
diffusa, <i>E.M.</i>	C.

Tephrosia, <i>Continued.</i>		
discolor, <i>E.M.</i>	A.	
elongata, <i>E.M.</i>	B.	
glomeruliflora, <i>Meisn.</i>	D.	
grandiflora, <i>Pers.</i>	CZ.	
Kraussiana, <i>Meisn.</i>	A-B.	
longipes, <i>Meisn.</i>	B.	
macropoda, <i>E.M.</i>	A-B. Z.	
oblongifolia, <i>E.M.</i>	B-C.	
pallens, <i>Pers.</i>	?	
plicata, <i>Oliv.</i>	?	
polystachya, <i>E.M.</i>	AB.	
17 Mundulea, <i>D.C.</i>		
suberosa, <i>Bth.</i>	?	
18 Millettia, <i>W. & A.</i>		
caffra, <i>Meisn.</i>	AB.	
Sutherlandi, <i>Harv.</i>	A-Z.	
19 Sesbania, <i>Persoon.</i>		
aculeata, <i>Pers.</i>	AB.	
punctata, <i>D.C.</i>	A.	
20 Sutherlandia, <i>R.Br.</i>		
frutescens, <i>R. Br.</i>	BC.	
21 Lessertia, <i>D.C.</i>		
perennans, <i>D.C.</i>	AB.	
tenuifolia, <i>E.M.</i>	Z.	
sp. (Wood 1824).	C.	
sp. (Cooper 2218).	B-C.	
22 Astragalus, <i>Linn.</i>		
Burkeanus, <i>Bth.</i>	C.	
23 Eschynomene, <i>Linn.</i>		
erubescens, <i>E.M.</i>	?	
micrantha, <i>D.C.</i>	AB.	
uniflora, <i>E.M.</i>	AB.	
24 Smithia, <i>Ait.</i>		
sensitiva, <i>Ait.</i>	BC.	
25 Arachis, <i>Linn.</i>		
hypogaea, <i>Linn.</i>	CULT.	
26 Stylosanthes, <i>L.</i>		
mucronata, <i>Willd.</i>	Z.	
27 Zornia, <i>Gmelin.</i>		
tetraphylla, <i>Michx.</i>	AB.	
28 Desmodium, <i>Desv.</i>		
Dregeanum, <i>Bth.</i>	AB.	
gangeticum, <i>D.C.</i>	A.	
hirtum, <i>Guill. & Per.</i>	AB.	
incanum, <i>D.C.</i>	A.	
paleaceum, <i>Guill. & Per.</i>	A.	
scalpe, <i>D.C.</i>	A-C.	
29 Pseudarthria, <i>W. & A.</i>		
Hookeri, <i>W. & A.</i>	A-C.	
30 Alysicarpus, <i>Necker.</i>		
rugosus, <i>D.C.</i>	AB.	
31 Vicia, <i>Linn.</i>		
sativa, <i>Linn.</i>	C.	
32 Abrus, <i>Linn.</i>		
precatorius, <i>Linn.</i>	A.	
pulchellus, <i>Wall.</i>	BC.	
33 Dumasia, <i>D.C.</i>		
villosa, <i>D.C.</i>	C.	
34 Glycine, <i>Linn.</i>		
javanica, <i>Linn.</i>	B.	
35 Teramnus, <i>Swartz.</i>		
labialis, <i>Spreng.</i>	A.	
36 Erythrina, <i>Linn.</i>		
caffra, <i>Thb.</i>	A-D.	
Humiana, <i>Spreng.</i>	BC.	
tomentosa, <i>Buch-Ham.</i>	BC.	
Zeyheri, <i>Harv.</i>	D.	
37 Canavalia, <i>Adams.</i>		
bonariensis, <i>Ldl.</i>	A.	
eusiformis, <i>D.C.</i>	BC.	
obtusifolia, <i>DC.</i>	A.	

38 *Phaseolus*, *L.*Schlechteri, *Harms.*39 *Vigna*, *Savi.*angustifolia, *Sond.*Burchellii, *Harv.*glabra, *Savi.*marginata, *Bth.*retusa, *Walp.*tenuis, *D. Dietr.*triloba, *Walp.*vexillata, *Bth.*40 *Voandzeia*, *Thouars.*subterranea, *Thouars.*41 *Dolichos*, *Linn.*altigenus, *Schltr.*angustifolius, *E. & Z.*biflorus, *L.*gibbosus, *Thb.*Lablab, *Linn.*sericeus, *E.M.*sp. (*J. M. Wood* 778).42 *Rhynchosia*, *Lour.*adenodes, *E. & Z.*bracteata, *Bth.*caribaea, *D.C.*cyanosperma, *Bth.*gibba, *E.M.*grandifolia, *Harv.*hirsuta, *E. & Z.*memnonia, *D.C.*minima, *D.C.*orthodanum, *Bth.*ovata, *W. & E.*pilosa, *Harv.*quadrata, *Harv.*reptabunda, *N.E.B.*sigmoidea, *Bth.*Totta, *D.C.*Woodii, *Schinz.*sp. (*Wood* 692),sp. (*Wood* 3532),sp. (*Wood* 4538).43 *Eriosema*, *D.C.*D. cajanoides, *Bth.*cordatum, *E.M.*distinctum, *N.E.B.*Kraussianum, *Meissn.*longipes, *N.E.B.*parvifolium, *E.M.*salignum, *E.M.*squarrosum, *Walp.*n. sp. (*Gov. Herb.* 762),

B. E-F.

44 *Flemingia*, *Roxb.*congesta, *Roxb.*45 *Dalbergia*, *Linn.*armata, *E.M.*obovata, *E.M.*46 *Baphia*, *Afzel.*racemosa, *Hochst.*47 *Calpurnia*, *E.M.*intrusa, *E.M.*la-iogyne, *E.M.*obovata, *Schinz.*sylvatica, *E.M.*villosa, *Harv.*Woodii, *Schinz.*48 *Sophora*, *Linn.*nitens, *Bth.*49 *Hoffmannseggia*, *Cav.*Burchellii, *Bth. & Hk.*Sandersoni, (*Harv.*) *Wood.*50 *Cassia*, *Linn.*comosa, *Vog.*delagoensis, *Harv.*mimosoides, *L.*obovata, *Collad.*occidentalis, *Linn.*tomentosa, *Linn.*51 *Bauhinia*, *Linn.*natalensis, *Oliv.*

Sandersoni, ?

tomentosa, *Linn.*

B.

BC.

D-E.

CD.

A-B.

A.

BC.

B.

E-F.

B.

AB.

AB.

BC.

A.

C.

A.

E.

EF.

?

Z.

C.D.

Z.

A-D.

A.

A.

A.

A.

A.

52 <i>Schotia, Jacq.</i>		56 <i>Acacia, Willd.</i>
brachypetala, <i>Sond.</i>	AB.	arabica, <i>Willd</i> var. <i>Kraussiana</i> . A.
latifolia, <i>Jacq.</i>	A.	caffra, <i>Willd.</i> B.
		Gerrardi, <i>Bth.</i> A.
53 <i>Entada, Adanson.</i>		horrida, <i>Willd.</i> D.
natalensis, <i>Bth.</i>	AB.	hirtella, <i>Willd.</i> D.
scandens, <i>Bth.</i>	?	cf. hebeclada, <i>D.C.</i> D.
		<i>Kraussiana</i> , <i>Meisn.</i> A.
54 <i>Elephantorrhiza, Bth.</i>		natalitia, <i>E.M.</i> ?
Burchellii, <i>Bth.</i>	A-E.	pennata, <i>Willd.</i> D.
		spinosa, <i>E.M.</i> ?
55 <i>Dichrostachys, DC.</i>		57 <i>Albizzia, Durazzini.</i>
nutans, <i>Bth.</i>	A.	fastigiata, <i>Oliv.</i> A.
		<i>Welwitschii</i> , <i>Oliv.</i> Z.

ORDER LVII. ROSACEÆ.

The name of this Order will be sufficient to indicate one of its most prominent members, the rose, but in addition to this it most probably includes more fruit-bearing trees than any other Order, an enumeration of which may not be out of place here. They are as follows:—Almond, Apple, Apricot, Blackberry, Cherry, Cocoa Plum, Loquat, Medlar, Nectarine, Peach, Pear, Plum, Quince, Raspberry, Strawberry, and others which are less well known. Among our indigenous species the only ones bearing eatable fruits are the four species of *Rubus*, our native blackberries. None of the other genera contain species of any economic value, though *Agrimonia* *Eupatoria* has been used medicinally.

Number of species about 1000.

(Ex. BLACKBERRY, BRAMBLE, ETC.)

Flowers without petals.	1
Flowers with petals.	2
1 Flowers bisexual. Leaves fan-shaped or reniform.	ALCHEMILLA.
1 Flowers unisexual or polygamous.	CLIFFORTIA.
2 Calyx 5-10 toothed. Petals 5-10, minute or 0. Carpel 1.	PYGEUM.
2 Calyx 5-lobed. Petals 5. Achenes many, drupaceous.	RUBUS.
2 Calyx 10 parted in two rows. Achenes few, dry, tailed.	GEUM.
2 Calyx 10-12 lobed in two rows. Achenes included in the hardened calyx tube.	LEUCOSIDEA.
2 Calyx 5-lobed. Achenes 1-2 enclosed in the hardened and densely hook-bristled calyx tube.	AGRIMONIA.

LIST OF SPECIES.

1 <i>Rubus</i> , <i>Linn.</i>		5 <i>Agrimonia</i> , <i>Linn.</i>
<i>Ludwigii</i> , <i>E.</i> & <i>Z.</i>	BC.	<i>Eupatoria</i> , <i>Linn.</i> var. <i>capensis</i> . <i>Harv.</i>
<i>pinnatus</i> , <i>Willd.</i>	D.	
<i>rigidus</i> , <i>Smith.</i>	A-D.	
<i>rosæfolius</i> , <i>Sm.</i>	Z.	
2 <i>Geum</i> , <i>Linn.</i>		6 <i>Oliffertia</i> , <i>Linn.</i>
<i>capense</i> , <i>Thb.</i>	D.	<i>linearifolia</i> , <i>E.</i> & <i>Z.</i>
3 <i>Alchemilla</i> , <i>Linn.</i>		<i>natalensis</i> , <i>J. M. Wood.</i>
<i>capensis</i> , <i>Thb.</i>	BC.	<i>octandra</i> , <i>Cham.</i>
<i>elongata</i> , <i>E.</i> & <i>R.</i>	C.	<i>serpyllifolia</i> , <i>Ch.</i> & <i>Sch.</i>
<i>madagascariensis</i> , <i>O. Hoffm.</i>	C-E.	<i>serrulata</i> (Engl.), <i>Diels.</i>
<i>Woodii</i> , <i>O. Kuntze.</i>	F.	<i>strobolifera</i> , <i>Linn.</i>
4 <i>Leucosidea</i> , <i>E.</i> & <i>Z.</i>		n. sp. (<i>Evans</i> 663).
<i>sericea</i> , <i>E.</i> & <i>Z.</i>	BE.	

ORDER LIX. SAXIFRAGEÆ.

An Order not well represented in Natal, *Cunonia capensis* known in the Cape Colony as "Rood Els," furnishes a timber which is in request; but it does not appear to be much used in Natal, though it is fairly common in the midlands.

Number of species about 540.

(Ex. Rood Els.)

Flowers racemose. Leaves pinnate. A tree.	CUNONIA.
Flowers axillary, paniculate. Leaves simple. A shrub.	CHORISTYLIS.

LIST OF SPECIES.

1 <i>Choristylis</i> , <i>Harv.</i>		2 <i>Cunonia</i> , <i>Linn.</i>
<i>rhamnoides</i> , <i>Harv.</i>	CD.	<i>capensis</i> , <i>Linn.</i>

ORDER LX. CRASSULACEÆ.

Almost the whole of the species of this Order are fleshy herbs or undershrubs, and about half of the known species are natives of South Africa. Some are used medicinally, some as a specific for corns, and some are purgative if taken internally. They are much more plentiful in the Cape Colony than in Natal.

Number of species about 400.

(Ex. EKUBALO.)

Stamens as many as petals.	1
Stamens twice as many as petals.	2
1 Corolla of 5-9 petals. Fleshy perennials.	CRASSULA.
1 Corolla of 4-5 petals. Annuals, often aquatic.	TILLÆA.

2 Calyx 5 parted. Corolla tubular, 5 lobed.	COTYLEDON.
2 Calyx 4 parted. Corolla 4 lobed.	KALANCHOE.
2 Calyx 4 lobed, inflated. Corolla 4 lobed.	BRYOPHYLLUM.

LIST OF SPECIES.

1 *Tillæa*, *Linn.*

inane, *E. & Z.*
subulata, *Benth & Hook.*

E.
?

portulacea, *Lam.* ?

quadrifida, *Baker.* B.

recurva, *N.E.B.* Z.

rosularis, *Harv.* B.

rubicunda, *E.M.* A-F.

sarcocaulis, *E. & Z.* B.

sarmentosa, *Harv.* B.

sediflora, *E. & Z.* D.

sessilifolia, *Baker.* ?

stachyera, *E & Z.* B.

subulata, *Hook.* E.

tenuicaulis, *Schon.* F.

tenuifolia, *Schon.* B-C.

umbriticola, *N.E.B.* F.

vaginata, *E. & Z.* A-E.

Woodii, *Schon.* C-E.

A-B.

?

3 *Kalanchoe*, *Adans.*

crenata, *Harv.* B.

hirta, *Harv.* B.

longicollis, *Baker.* C.

longiflora, *Schltr.* C-L.

rotundifolia, *Harv.* A-B.

thyrsiflora, *Harv.* BC.

B-C.

?

B.

B.

B-F.

?

A-B.

A-C.

B.

4 *Cotyledon*, *Linn.*

orbiculata, *Linn.* B.

5 *Bryophyllum*, *Salisb.*

calycinum, *Salisb.* A.

ORDER LXI. DROSERACEÆ.

An Order of which we have in Natal one genus only, the well-known "Sundew." In the Cape Colony another genus is found (*Roridula*), a much larger plant than the "Sundew," which the Dutch are said to hang in their houses to catch flies. The Droseras are said to be harmful to sheep, but have been used medicinally. They are usually found in moist places.

Number of species more than 100.

(Ex. SUNDEWS.)

Stamens 4-8. Styles 2-5.

DROSERA.

LIST OF SPECIES.

1 Drosera, Linn.

Burkeana, Planch.	AB.
madagascariensis, D.C.	B.C.
ramentacea, Burch.	A.

ORDER LXII. HAMAMELIDÆ.

A small Order of which two species only are known to exist in Natal. The only useful plant of any note in the family is *Hamamelis virginica*, of which the leaves and bark are used medicinally. Another genus yields a good timber

Number of species about 30.

(Ex. ONDERBOSCH.)

Flowers unisexual, spiked. Petals in male flowers, linear-clavate, long.

TRICHOCLADUS.

Flowers unisexual, spiked. Petals none.

MYROTHAMNUS.

LIST OF SPECIES.

1 Trichocladus, Pers. 2 Myrothamnus, Welw.

erinitus, Pers.	BCZ.	flabellifolius, Welw.	EF.
grandiflorus, Oliv.	E.		

ORDER LXIII. BRUNIACEÆ.

Another small family almost, if not quite, confined to the Cape Colony, and the only species known to us was gathered near the southern boundary of Natal. None of the species have any economic value.

Number of species about 40,

Petals 5. Stamens 5. Anthers without apical appendage. BERARDIA.

1 Berardia, Brong.	C.
trigyna, Schltr.	

ORDER LXIV. HALORAGEÆ.

The members of this family are chiefly aquatic, and have but little economic value. *Gunnera scabra* is cultivated as an ornamental plant, its leaves reaching to 6 feet in diameter. In its native country it is used for tanning and as an astringent.

Number of species about 80,

Leaves on long petioles, all radical,	GUNNERA,
Leaves sessile, entire or toothed. Prostrate herbs.	SERPICULA.
Leaves whorled, pectinate parted. Aquatic.	MYRIOPHYLLUM.
Leaves opposite, entire. Flowers unisexual.	CALLITRICHE.

LIST OF SPECIES.

1 Serpicula , <i>Linn.</i>	3 Myriophyllum , <i>Linn.</i>	
repens, <i>Linn.</i>	A. spicatum, <i>Linn.</i>	D.
2 Gunnera , <i>Linn.</i>	4 Gallitriche , <i>Linn.</i>	
perpensa, <i>Linn.</i>	A-E. Bolusii, <i>Sch. & Pax.</i>	E.

ORDER LXV. RHIZOPHOREÆ.

This Order is for the most part a tropical one, and it includes the two genera popularly known as "Mangroves." The wood of several of the species is durable, and our Weihea and Cassipourea are both handsome trees well worthy of cultivation.

Number of species about 50.

(Ex. MANGROVE.)

Ovary inferior. Seed germinating within the fleshy fruit.	1
Ovary superior or half inferior. Fruit capsular.	2

1 Calyx 4 fid. Petals 4.	RHIZOPHORA.
1 Calyx 5-12 fid. Petals 5-12, two fid.	BRUGUIERA,
2 Petals 4-16 multifid. Stamens 20-30.	WEIHEA.
2 Petals 4-5 multifid. Stamens 10.	CASSIPOUREA.

LIST OF SPECIES.

1 Rhizophora , <i>Linn.</i>	3 Weihea , <i>Spr.</i>	
mucronata, <i>Lam.</i>	A. Gerrardi, <i>Schinz.</i>	B.
2 Bruguiera , <i>Lam.</i>	4 Cassipourea , <i>Aubl.</i>	
gymnorhiza, <i>Lam.</i>	A. verticillata, <i>N.E.B.</i>	A.

ORDER LXVI. COMBRETACEÆ.

Another almost entirely tropical Order, consisting of trees and shrubs, some of which are possessed of useful properties. Some yield excellent timber, others are useful on account of the amount of tannin contained in their bark or fruits. The fruits of *Terminalia Chebula* are known as "Myrabolans" and used for tanning; and the galls on the leaves are used for the same purpose. The leaves of several species of the genus *Terminalia* form the food of the "Tussa" silkworm. *T. catappa* is a handsome tree, and its fruits are eatable. *T. angustifolia* yields a white, scented gum, which is used as a cosmetic and for

burning as incense. The seeds of our *Combretum bracteosum* when eaten produce violent hiccup, and are known locally as "Hiccup Nuts." None of our species are of much economic value.

Number of species about 240.

(Ex. HICCUP NUT. UMBONDWE.)

Calyx tube short, limb campanulate.

COMBRETUM.

Calyx tube long and slender, limb short.

QUISQUALIS.

(LIST OF SPECIES.)

1 <i>Combretum</i> , <i>Linn.</i>			
apiculatum, <i>Sond.</i>	D.	Kraussii, <i>Hochst.</i>	BC.
bracteosum, <i>Brandis.</i>	A.	salicifolium, <i>E.M.</i>	D.
erythrophylum, <i>Sond.</i>	AB.	riparium, <i>Sond.</i>	D.
glomeruliflorum, <i>Sond.</i>		Sonderi, <i>Gerr.</i>	A.
glutinosum, <i>Perr.</i>	CD.	2 <i>Quisqualis</i> , <i>Rumph.</i>	
Gueinzii, <i>Sond.</i>	B.	parviflora, <i>Gerr.</i>	A.

ORDER LXVII, MYRTACEÆ,

A large Order containing many useful plants, the common "Myrtle" (*Myrtus communis*), is well known. *Eugenia caryophyllata* yields the "Cloves" of commerce, and *E. Pimenta*, the "Allspice," and the fruits of several species of *Eugenia* are eatable. The well-known Guavas belong to this Order, as do the Eucalypti. The seeds of *Bertholetia excelsa* are known as "Brazil Nuts," and the seeds of *Lecythis ollaria* as "Sapucaya Nuts." Vases, etc., are made of the capsules of this tree, hence the name of "Monkey Pot" by which the fruits are known. *Melaleuca cajeputi* yields "Cajeput Oil," and is used medicinally. Our only useful species is *Eugenia cordata*, the well-known "Waterboom," the timber of which is valuable for building purposes, etc.

Number of species about 1800.

(Ex. WATERBOOM. GUAVA.)

Leaves opposite, usually pellucid dotted.

EUGENIA.

Leaves alternate, not pellucid dotted.

BARRINGTONIA.

LIST OF SPECIES.

1 <i>Eugenia</i> , <i>Linn.</i>			
albanensis, <i>Sond.</i>	AB.	Zeyheri, <i>Harv.</i>	?
capensis, <i>Harv.</i>	A.	sp. (<i>Acmena Gerrardi</i> , <i>Harv.</i>) AB.	
cordata, <i>Law.</i>	AB.	2 <i>Barringtonia</i> , <i>Forster.</i>	
Gueinzii, <i>Sond.</i>	?	racemosa, <i>Roxb.</i>	A.
natalitia, <i>Sond.</i>	A.		

ORDER LXVIII. MELASTOMACEÆ.

A tropical and sub-tropical Order, the greater number of its members being natives of S. America, with but few in other countries. The berries of some species of the genus *Melastoma* are eatable, but stain the mouth, hence the name of the Order. None are of much, if any, economic value; but some bear brightly-coloured and very ornamental flowers, such as *Pleroma macrantha*, commonly cultivated in gardens. Some of our indigenous species of *Dissotis* are well worth cultivation.

Number of species about 1800.

EX. IMFE-YE-INKALA.)

Leaves 5-ribbed. Anthers opening by pores.	DISSOTIS.
Leaves 9-ribbed. Anthers slitting.	MEMECYLON.

1 <i>Dissotis</i> , Bth.	2 <i>Memecylon</i> , Linn.
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<i>eximia</i> , Harv.	AB.	capense, E. & Z.
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<i>incana</i> , Naud.	AB.
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<i>phaeotricha</i> , Triana.	A.
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ORDER LXIX. LYTHRARIAE.

A small order, the members of which are chiefly found in tropical and subtropical countries, a few only inhabiting temperate regions. Some of the species contain tannin, others are used medicinally. The "Henna," which is used by some women in India for dying their nails and hair is *Lawsonia alba*. The *Lagerstroemias* are cultivated for the beauty of their flowers, and are known locally as "Pride of India." One of them, *L. Flos-Regineæ*, yields a valuable wood, and the timber of some other species is used in India. None of our species have any economic value. *Lythrum* and *Nesæa* are herbaceous plants. *Heteropyxis* and *Rhynchosalyx* are shrubs or small trees, the latter plant being apparently very rare, one plant only, so far, having been observed by botanists.

Number of species about 250.

Herbs or undershrubs.	1
Small trees.	2

1 Calyx tubular. Ovary 2-celled.	LYTHRUM.
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1 Calyx bell-shaped. Ovary 3-celled.	NESÆA.
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2. Stamens 5, opposite petals. Leaves aromatic.	HETEROPYXIS.
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2. Stamens 5-6, opposite petals, petals fimbriate.	RHYNCHOCALYX.
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2. Stamens 5, alternate with petals, petals entire.	OLINIA.
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LIST OF SPECIES.

1 <i>Lythrum</i> , Linn.	2 <i>Nesæa</i> , Commerson.
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<i>rigidulum</i> , Sond.	?	floribunda, Sond.	A.
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<i>rivulare</i> , Wood & Evans.	Z.	Kuntzei, Koehne.	?
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<i>sagittæfolium</i> , Sond.	DE.	sagittæfolia, Koehne.	?
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		Schinzii, Koehne.	DE.
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		tolypobotrys, Koehne.	
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3 <i>Heteropyxis</i> , <i>Harv.</i>	5 <i>Olinia</i> , <i>Thb.</i>	
<i>natalensis</i> , <i>Harv.</i>	<i>cymosa</i> , <i>Thb.</i>	E.
4 <i>Rhynchocalyx</i> , <i>Oliv.</i>		
<i>lawsonioides</i> , <i>Oliv.</i>	B.	

ORDER LXX. ONAGRARIEÆ.

A small Order chiefly confined to temperate countries, few only being found in the tropics. The best known genera are *Epilobium*, popularly called the "Willow Herb," and *Œnothera*, the "Evening Primrose"; *Clarkia*, a common garden plant; and *Fuchsia*, which is a native of Central and South America. None of the members of the Order have any known useful properties, and are cultivated for ornament only.

Number of species about 300.

(Ex. EVENING PRIMROSE.)

Seeds comose. Petals 4. Stamens 8. Ovary 4-celled.	EPILOBIUM.
Seeds nude. Petals 4. Stamens 8. Ovary 4-celled.	ŒNOTHERA.
Capsule elongate.	
Seeds nude. Petals 4-6. Stamens 8-12. Ovary 4-celled.	JUSSIÆA.
Capsule elongate.	
Seeds nude. Petals 3-6. Stamens 3-6. Ovary 3-6 celled. Capsule elongate.	LUDWIGIA.
Seeds nude. Floating herbs, petioles long.	TRAPA.

LIST OF SPECIES.

1 <i>Epilobium</i> , <i>Linn.</i>	3 <i>Ludwigia</i> , <i>Linn.</i>
<i>capense</i> , <i>Burch.</i>	B. <i>jussæoides</i> , <i>Harv.</i> (non. <i>Lam.</i>) Z.
<i>flavescens</i> , <i>E.M.</i>	B. <i>palustris</i> , <i>Lam.</i> C-F.
<i>hirsutum</i> , <i>Linn.</i>	B.
<i>tetragona</i> , <i>Linn.</i>	B. 4 <i>Œnothera</i> , <i>Linn.</i>
2 <i>Jussiæa</i> , <i>Linn.</i>	biennis, <i>L.</i> A.
<i>repens</i> , <i>Linn.</i>	A. macrantha. A.
<i>suffruticosa</i> , <i>Linn.</i>	A. rosea, <i>Ait.</i> C.
	5 <i>Trapa</i> , <i>Linn.</i>
	<i>bispinosa</i> , <i>Roxb</i> A.

ORDER LXXIV. SAMYDACEÆ.

A small family, chiefly tropical. None of the species are known to be of any economic value.

Number of species about 150,

Petals 6-7, linear oblong.	Capsule many seeded.	
Shrubs.		HOMALIUM.
Petals 5, ovate-rotundate.	Fruit dry, 1-seeded. Tree.	GERRARDINA.

LIST OF SPECIES.

1 <i>Homalium, Jacq.</i>	2 <i>Gerrardina, Oliv.</i>	
<i>rufescens. Bth.</i>	<i>foliosa, Oliv.</i>	B.
sp. (<i>Blackwellia dentata</i>). ?		

ORDER LXXIV. PASSIFLOREÆ.

A small Order of tropical and subtropical plants, the largest number of which are found in America. The Passifloras are well known both as ornamental plants and also on account of their eatable fruits, commonly known as "Granadillas," of which there are several species and varieties; but it may not be so well known that the roots of some at least of the species are considered to be poisonous. *Carica papaya* is the common "Papaw," too well known in Natal to require further notice here. From its sap "Papaine" is obtained by evaporation, and is used medicinally. One of the American species of *Carica* is said to be very poisonous.

Number of species about 250.

(Ex. PASSION FLOWER; GRANADILLA.)

Flowers bisexual. Calyx 3-parted. Corona double.	TRYPHOSTEMMA.
Flowers dioecious. Calyx 5 fid. Disk 5 glandular.	
Corono O.	MODECCA.
Flowers dioecious. Calyx 5 parted. Disk without glands. Corona O.	
Flowers monoecious. Calyx 3-5 parted. Corolla monopetalous, 3-5 lobed. Capsule pod-like.	OPHIOCAULON.
	CERATOSICYOS.

LIST OF SPECIES.

1 <i>Tryphostemma, Harv</i>	3 <i>Ceratosicyos, Nees.</i>	
<i>Sandersoni, Harv.</i>	<i>Eckloni, Nees.</i>	BCZ.
2 <i>Ophiocaulon, Hook.</i>	4 <i>Modecca, Lam.</i>	
<i>gummifera, Hk. f.</i>	<i>digitata, Harv.</i>	EZ.

ORDER LXXV. CUCURBITACEÆ.

An easily recognised Order, which is rare in temperate climates and quite absent from cold ones. It includes many plants which are used both medicinally and as food. *Bryonia alba* and *dioica* are both poisonous, but are used medicinally. *Citrullus colocynthus* gives the

well known "Colocynth." Several other species are used medicinally in the countries where they are indigenous. Of the species yielding eatable fruits it is only necessary to enumerate the following:—Cucumber, Pumpkin, Melon, Water Melon, and Vegetable Marrow, of all of which there are numerous varieties. The true "Gherkin" is not, as is commonly supposed, the young fruits of the common cucumber, but of *Cucumis Anguria*, a West Indian species, *Telfairia pedata* is a wide climbing plant of the East Coast of Africa, and is occasionally met with in cultivation in Natal. Its fruits are large, and contain many large, flattened seeds, having a hard outer covering, while the kernels have a nutty flavour and contain a large percentage of oil.

Number of species about 470,

Anther cells flexuous (rarely straight in *Cucumis* and *Momordica*). 1

Anther cells straight. 6

1 Corolla rotate or bell-shaped, limb deeply divided. 2

1 Corolla bell-shaped, 5-lobed rarely below the middle. 5

2 Calyx tube short. 3

2 Calyx tube long (at least in the female flowers). 4

3 Connective produced beyond the anther cells. 5

3 Connective not produced Calyx with two scales between the stamens. Tendrils simple. 3

3 Calyx tube without scales Anther cells more or less cohering. Tendrils branched. 4

3 Calyx tube without scales. Anther cells separate. Tendrils branched. 5

4 Fruit a few-seeded berry. Diœcious. 6

4 Fruit a few-seeded berry. Monoœcious. 7

4 Fruit dry or fibrous within. Seeds flat. 8

4 Fruit fleshy. Seeds with tumid border. 9

4 Fruit fleshy. Seeds compressed, black. 10

5 Tendrils simple Fruit a berry. 11

6 Anthers 3-5, one 1-celled, remainder 2-celled, filaments elongate. 12

6 Anthers 3-5, one 1-celled, remainder 2-celled, subsessile. Seeds flattened. 13

6 Anthers 3, one 1-celled, remainder 2-celled, or all 1-celled. Seeds tumid. 14

6 Anthers 4, 1-celled, and one barren. Seeds winged. 15

CUCUMIS.

MORMORDICA.

CITRULLUS.

TOXANTHERA.

TROCHOMERIA.

MUKIA.

LUFFA.

LAGENARIA.

PEPONIA.

COCCINEA.

ZEHNERIA.

MELOTHRIA.

KEDROSTIS.

GERRARDANTHUS.

LIST OF SPECIES.

1 *Trochomeria*, *Hook.*

Hookeri, *Harv.*

sagittata, *Hk. f.*

pectinata, *Benth & Hook.*

2 *Peponia*, *Naud.*

McKenii, *Naud.*

B.

BC.

Z.

3 Luffa, *Cav.*

sphœrica, *Sond.*

A.

A.

4 <i>Momordica</i> , <i>Linn.</i>		8 <i>Mukia</i> , <i>Arn.</i>	
balsamina, <i>L.</i>		scabrella, <i>W. & A.</i>	A-C.
charantia, <i>Linn.</i>	A.		
foetida, <i>Schum.</i>	B.	9 <i>Zehneria</i> , <i>Endl.</i>	
involucrata, <i>E.M.</i>	A.	obtusiloba, <i>Sond.</i>	?
sp. (<i>Wood</i> 5418).	C-D	scabra, <i>Sond</i>	A-B.
5 <i>Oucumis</i> , <i>Linn.</i>		10 <i>Kedrostis</i> , <i>Medic.</i>	
africanus, <i>Linn.</i>	?	foetidissima, <i>Cogn.</i>	A-B.
dissectifolius, <i>Naud.</i>	?	longipedunculata, <i>Cogn.</i>	A-B.
Figarei, <i>Del. var.</i>	B.		
hirsutus, <i>Sond.</i>	B.	11 <i>Melothria</i> , <i>Linn.</i>	
metuliferus, <i>E.M.</i>	?	membranifolia, <i>Cogn.</i>	A.
		parviflora, <i>Cogn.</i>	B.
6 <i>Oitrullus</i> , <i>Schrad.</i>		12 <i>Toxanthera</i> , <i>Hk. f.</i>	
vulgaris, <i>Schrad.</i>	B.	natalensis, <i>Hk. f.</i>	B.
7 <i>Coccinea</i> , <i>W. & A.</i>		13 <i>Gerrardanthus</i> , <i>Harv.</i>	
hirtella, <i>Cogn.</i>	?	macrorhiza, <i>Harv.</i>	A-B.
n. sp. (<i>Wood</i> 4105).	C-D.	tomentosa, <i>Hook.</i>	B.
McKenii, <i>Cogn.</i>	?		
palmata, <i>Cogn.</i>	A-B.	14 <i>Lagenaria</i> , <i>Seringe.</i>	
		vulgaris, <i>Ser.</i>	?

ORDER LXXVI. BEGONIACEÆ.

A tropical and subtropical Order, members of which are found in most tropical countries, except Australia, from which continent they are totally absent. Most of the species contain Oxalic acid, and some are used medicinally in the countries of which they are natives. Many species of *Begonia* and a large number of varieties are in cultivation.

Number of species about 350.

Succulent herbs with tuberous roots and monoecious flowers. BEGONIA.

LIST OF SPECIES.

1 *Begonia*, *Linn.*

<i>Dregei</i> , <i>Ott. & Dietr.</i>	B.
<i>geranioides</i> , <i>Hk. f.</i>	B.
<i>natalensis</i> , <i>Hk</i>	A-B.
<i>suffruticosa</i> , <i>Meisn.</i>	A-E.

ORDER LXXVIII. CACTEÆ.

An order almost confined to tropical America, the only genus found in any other country being *Rhipsalis*, one or more species of which are found in South Africa, Madagascar, and India. Some, however, of the species of *Opuntia* have become naturalised in South

Africa and in other parts of the world, and by their great tenacity of life have become a nuisance in places specially favourable to their growth. Some of the species are used medicinally, and the fruits of others are eatable. Several species of *Opuntia* form the food plant of the Cochineal insect. Our only species (*Rhipsalis cassytha*) is a cord-like plant hanging from rocks and trees in the midland and upper districts. The plants usually spoken of in Natal as Cacti are either Euphorbias or Asclepiads.

Number of species probably about 1000.

Stems terete, green. Berry pisiform, smooth.

RHIPSALIS.

1 *Rhipsalis*, *Gaertn.*

Cassytha, *Gaertn.* B-E.

ORDER LXXIX. FICOIDEÆ.

The members of this family are chiefly weeds without any useful properties. The genus *Mesembryanthemum* is a large one, but is far more common in the Cape Colony than in Natal. Some of its species bear brightly-coloured and showy flowers, and one species formed the base of a proprietary medicine which was prepared and sold in Natal.

Number of species about 450.

(Ex. HOTTENTOT FIG.)

Capsule with star-like opening at apex.	1
Capsule loculicidal, cells many ovuled.	2
Capsule loculicidal or fruit indehiscent, its cells 1 seeded.	3
1 Petals and stamens very numerous.	MESEMBRYANTHEMUM.
1 Petals none. Stamens about 20. Stipules 0.	AIZOON.
1 " " " " 3-30. Stipulate.	PHARNACEUM.
2 Sepals unequal, cuspidate. Seeds arilled.	ORYGIA.
2 Sepals sub-equal. Seeds not arilled.	MOLLUGO.
3 Stamens 5 Capsule 3-5 angled. Seeds globose.	PSAMMOTROPHA.
3 Fruit of 2 separable hemispherical carpels.	LIMEUM.

LIST OF SPECIES.

1 <i>Mesembryanthemum</i> , <i>Linn.</i>	4 <i>Mollugo</i> , <i>Linn.</i>
edule, <i>Linn.</i> A.	oppositifolia, <i>Linn.</i>
hirtum, <i>N.E. B.</i> DE.	5 <i>Pharnaceum</i> , <i>Linn.</i>
uncinellum, <i>Harv.</i> ?	distichum, <i>Thb.</i> ?
2 <i>Aizoon</i> , <i>Linn.</i>	6 <i>Psammotropha</i> , <i>Linn.</i>
canariense, <i>Linn.</i> A.	androsacea, <i>Fenzl.</i> B-E.
glinoides, <i>Linn.</i> ?	myriantha, <i>Sond.</i> B-D.
3 <i>Orygia</i> , <i>Forsk.</i>	7 <i>Limeum</i> , <i>Linn.</i>
decumbens, <i>Forsk.</i> A.	viscosum, <i>Fenzl.</i> AB.

ORDER LXXX. UMBELLIFERÆ.

An Order of plants remarkable for the large number of culinary vegetables included in it, such as "Celery" (*Apium graveolens*), "Parsley" (*Petroselinum sativum*), "Caraway" (*Carum carui*), "Anise" (*Pimpinella Anisum*), "Fennel" (*Fæniculum vulgare*), "Samphire" (*Crithmum maritimum*), "Parsnip" (*Pastinaca oleracea*), "Cumin" (*Cuminum cyminium*), "Carrot" (*Daucus carota*), "Coriander" (*Coriandrum sativum*), and a few other less important ones. Amongst the medicinal and poisonous members of the family are the following:—"Hemlock" (*Conium maculatum*), "Water Hemlock" (*Cicutaria virosa*), "Meadow Saffron" (*Œnanthe crocata*), "Lesser Hemlock" or "Fools Parsley" (*Æthusia cynapium*), "Angelica" (*Angelica archangelica*), "Asafœtida" (*Narthex asafœtida*), "Gum Ammoniac" (*Dorema Ammoniacum*), and some others. Though the Order contains many useful plants its members should be used with great caution unless well known, especially the uncultivated species, as many deaths have been caused by their injudicious use.

Number of species about 1300.

(EX. WILD CELERY. PARSLEY.)

Albumen (as seen in a cross section of the ripe fruit)	
flat or not grooved on its inner face.	1
Albumen with a longitudinal furrow along its inner face.	9
1 Umbels simple or imperfect, or flowers capitate.	2
1 Umbels compound or perfect.	3
2 Fruit laterally compressed.	HYDROCOTYLE.
2 Fruit ovate globose, covered with hooked bristles.	SANICULA.
2 Fruit tuberculated.	ALEPIDEA.
3 Fruit laterally compressed or didymous.	4
3 Cross section of fruit circular or nearly so, the carpels slightly compressed at back.	6
3 Fruit much compressed, with a wing on each side.	8
4 Carpophore distinct, entire, not 2 parted.	APIUM.
4 Carpophore 2 parted.	5
5 Fruit ovate. No involucre or involuel.	
5 Fruit sub-didymous. Involucre and involuel present.	
5 Carpels unequal. Leaves 3 lobed or 3 parted.	SIUM.
5 Carpels equal. Leaves entire, linear.	HETEROMORPHA.
6 Vittæ under ribs of fruit, none in the furrows.	BUPLEURUM.
6 Vittæ under furrows of fruit.	LICHENSTEINIA.
7 Carpels unequal.	7
7 Carpels equal, ribs membranous, wing-like.	ANESORHIZA.
8 Margin of fruit broad. Petals emarginate.	SELINUM.
9 Fruit ovate, compressed. Leaves 3-4 pinnate.	PEUCEDANUM.
	CONIUM.

LIST OF SPECIES.

1 <i>Hydrocotyle</i> , <i>Linn.</i>		7 <i>Lichtensteinia</i> , <i>Ch. & Sch.</i>
<i>americana</i> , <i>Linn.</i> , var. <i>monticola</i> , <i>Hk. f.</i>	B.	<i>interrupta</i> , <i>E.M.</i>
<i>asiatica</i> , <i>Linn.</i> , var. <i>repanda</i> .	A-D.	sp. (<i>Wood</i> 485).
<i>centella</i> , <i>Cham. & Sch.</i>	BZ.	
<i>umbellata</i> , <i>Linn.</i>	A.	
sp. (<i>J. M. Wood</i> 1345).	BZ.	
2 <i>Alepidea</i> , <i>La Roche.</i>		8 <i>Apium</i> , <i>Linn.</i>
<i>amatymbica</i> , <i>E. & Z.</i>	B-D.Z.	<i>graveolens</i> , <i>Linn.</i>
<i>pillaris</i> , <i>La Roche.</i>	C-D.	
<i>longifolia</i> , <i>E.M.</i>	E-F.	
<i>natalensis</i> , <i>Wood & Evans.</i>	C-D.	9 <i>Sium</i> , <i>Linn.</i>
<i>setifera</i> , <i>N.E.B.</i>	C-E.	<i>Thunbergii</i> , <i>D.C.</i>
<i>Woodii</i> , <i>Oliv.</i>	B.	
sp. (<i>Thode Gov. Herb.</i> 10, 770).	F.	10 <i>Pimpinella</i> , <i>Linn.</i>
sp. (<i>Wood</i> 3502).	D.	<i>caffra</i> , <i>Harv.</i>
3 <i>Sanicula</i> , <i>Linn.</i>		<i>reenensis</i> , <i>Reching.</i>
<i>europaea</i> , <i>Linn.</i>	B.	sp. (<i>Cnidium Kraussianum</i>).
4 <i>Oonium</i> , <i>Linn.</i>		
<i>maculatum</i> , <i>Linn.</i>	C.	11 <i>Anesorhiza</i> , <i>Ch. & Sch.</i>
5 <i>Bupleurum</i> , <i>Linn.</i>		sp. (<i>Peucedanum triternatum</i>).
<i>Mundtii</i> , <i>Ch. & Sch.</i>	D.	12 <i>Peucedanum</i> , <i>Linn.</i>
6 <i>Heteromorpha</i> , <i>Ch. & Sch.</i>		<i>capense</i> , <i>Sond.</i>
<i>arborescens</i> , <i>Ch. & Sch.</i>	BC.	<i>connatum</i> , <i>E.M.</i>
		sp. (<i>Seseli caffrum</i>).
		sp. (,, <i>natalensis</i>).
		sp. (<i>Govt. Herbm.</i> , 3619).
		13 <i>Selinum</i> , <i>Linn.</i>
		<i>subfruticosum</i> , <i>Bth. & Hk.</i>
		A.

ORDER LXXXII. ARALIACEÆ.

This Order contains but few species that are useful to mankind. *Hedera Helix*, the common Ivy, is well known. The roots of *Panax* "Ginseng," are highly esteemed by the Chinese, and "Rice paper" is made from the pith of *Fatsia papyrifera*. Our species have no economic value.

Number of species about 340.

(Ex. CABBAGE TREE. IVY.)

Fruit roundish, top-shaped, crowned with large disk.	CUSSONIA.
Fruit laterally compressed, oblong.	PANAX.

LIST OF SPECIES.

1 <i>Panax</i> , <i>Linn.</i>		2 <i>Gussonia</i> , <i>Thb.</i>
<i>Gerrardi</i> , <i>Harv.</i>	B.	<i>Gerrardi</i> , <i>Seem.</i>

chartacea, *Schinz.*

C.
A.

Cussonia, *Continued.*

Kraussii, <i>Hochst.</i>	?
natalensis, <i>Sond.</i>	B.
paniculata, <i>E. & Z.</i>	D.
spicata, <i>Thb.</i>	A.
umbellifera, <i>Sond.</i>	AB.

ORDER LXXXIII. CORNACEÆ.

A small Order chiefly confined to the Northern Hemisphere. The wood of some of the species is hard and useful, and the bark of others is bitter and used instead of quinine. The drupes of *Cornus mascula* are used in the East in making sherbet. *Benthamia fragifera* bears a fruit resembling a strawberry, and has an agreeable taste, and the Aucubas are well known in Europe as ornamental plants. Our species is the only one of its genus, and is known in the Cape Colony as "Assegai Wood," and the wood is much esteemed. In Natal the tree is not very plentiful.

Number of species about 75.

Flowers hermaphrodite, paniculate. Leaves opposite,
toothed.

CURTISEA.

1 *Curtisia*, *Ait.*
faginea, *Ait.* DE.

ORDER LXXXIV. RUBIACEÆ.

A large and interesting Order, chiefly tropical, but including many species which are found in temperate regions. Of medicinal plants belonging to the family the most important are different species of Cinchona, which yield quinine, and *Cephaelis Iperachua-nha*, yielding the drug of that name. The Cinchonas are trees and shrubs natives of S. America, and the Cephælis of Brazil. Other species of the Order are also used medicinally. Another and most important member of the Order is *Coffea arabica*, from which, with some other species, the coffee of commerce is obtained. Madder is the dried root of *Rubia tinctorum*, and is used by dyers; and Gambir, which is used by tanners, is obtained from *Uncaria gambir*, a native of the Malay peninsula. Amongst our native species the woods of *Burchellia cupensis*, *Gardenia Thunbergia*, and *Rothmannia*, *Plectronia ventosa* and *Mundtiana* are said to be hard and heavy; but the trees are not large, and the woods have but little commercial value.

Number of species more than 4000.

KEY TO SERIES.

Ovules in cells indefinite.
Ovules in cells 2, collateral.
Ovules in cells solitary.

SERIES A.
SERIES B.
SERIES C.

KEY TO TRIBES.

SERIES A.

Flowers in dense globose heads. Corolla funnel-shaped.
Stigma simple.

Corolla valvate. Fruit indehiscent, 2-coccous, or capsular, 2-celled.

Corolla twisted in bud. Seeds large, compressed, or small and angular,

NAUCLEÆ.
HEDYOTIDÆ.
GARDENIEÆ.

SERIES B.

NOT REPRESENTED IN NATAL.

SERIES C.

Radicle superior. 1
Radicle inferior. 2

1 Corolla valvate. Inflorescence terminal. Herbs.

1 Corolla contorted or imbricate. Shrubs or trees.

1 Corolla valvate. Inflorescence axillary. Shrubs or trees.

2 Corolla contorted. Style long exserted, stigma clavate.

2 Corolla valvate. Stigma entire, or style arms short. Fruit indehiscent.

2 Corolla contorted. Style 1, stigma 2-lobed, lobes obtuse, linear or spatulate.

2 Style arms filiform. Fruit 2-coccous.

2 Styles 2, stigmas capitate.

KNOXIEÆ.
ALBERTIEÆ.
VANGUERIEÆ.
IXOREÆ.
PSYCHOTRIEÆ.
SPERMACOCEÆ.
ANTHOSPERMEÆ.
GALIEÆ.

KEY TO GENERA.

SERIES A.

NAUCLEÆ.

Ovary 2-celled, ovules pendulous. Shrubs or small trees.

CEPHALANTHUS.

HEDYOTIDÆ.

Calyx lobes unequal. Style arms papillose on both surfaces. Flowers cymose.

Calyx lobes equal or nearly so. Style arms smooth on outer surfaces, stigmatose within. Flowers in terminal or axillary panicles.

PENTAS.

OLDENLANDIA.

GARDENIÆ.

Inflorescence terminal.	1
Inflorescence axillary, rarely opposite the leaves or lateral.	2
1 Stigma minute. Inflorescence capitate. Flowers red. Shrubs.	BURCHELLIA.
1 Stigma fusiform. Inflorescence corymbose. Flowers white. Shrubs.	WEBERA.
2 Stigma fusiform or clavate, entire or 2-toothed.	3
2 Stigma fusiform or clavate, 2-lobed; lobes erect or revolute.	4
3 Ovary 2-celled. Corolla tube short.	RANDIA.
3 Ovary 1-celled. Corolla tube medium.	GARDENIA.
3 Ovary 1-2-celled. Corolla tube long or very long.	OXYANTHUS.
4 Berry small, pisiform, fleshy, 1-3-seeded.	KRAUSSIA.
4 Berry small, pisiform, coriaceous. Calyx subtended by a cup-like bract.	TRICALYSIS.

SERIES C.

KNOXIEÆ.

Calyx unequally 3-5 lobed. Stigma simple or capitate. Flowers dimorphic.	PENTANISIA.
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ALBERTEÆ.

Calyx lobes 2-4, accrescent, reticulate and coloured in fruit.
--

ALBERTA.

VANGUERIEÆ.

Stigma capitate, oblong or mitre-shaped. Drupe of 1-2 pyrenes.	PLECTRONIA.
Stigma capitate or cylindrical. Drupe of 3-6 (rarely 2) pyrenes.	VANGUERIA.
Stigma coroniform. Drupe of 3-6 pyrenes. Leaves verticillate.	FADOGIA.

IXOREÆ.

Flowers 4-merous, white or yellowish. Shrubs.

PAVETTA.

Drupe of 2, plano-convex pyrenes. Inflorescence never thyrsoid. Shrubs.

PSYCHOTRIA.

ANTHOSPERMEÆ.

Flowers perfect. Coccii indehiscent, muricate. Flowers terminal.
--

GALOPINA.

Flowers often dioecious. Cacci indehiscent, or dehiscing at the ventral suture. Flowers axillary. *ANTHOSPERMUM.*

SPERMACOCEÆ.

Fruit 2-celled. Aquatic.	<i>HYDROPHYLAX.</i>
Fruit 2-coccus, cocci separating. Flowers axillary.	<i>SPERMACOCE.</i>
Fruit 2-4-celled, circumscissile. Calyx with two teeth longer than the others. Fruit didymous.	<i>MITRACARPUM.</i>
Fruit 2-4-celled. Calyx lobes equal or subequal.	<i>RICHARDSONIA.</i>
Fruit 3-4 coccus.	

GALLIEÆ.

Flowers 5-merous. Fruit fleshy.	<i>RUBIA.</i>
Flowers 4-merous. Fruit dry.	<i>GALIUM.</i>

LIST OF SPECIES.

1 <i>Cephalanthus</i> , <i>Linn.</i>		6 <i>Randia</i> , <i>Linn.</i>	
<i>natalensis</i> , <i>Oliv.</i>	E.	<i>dumetorum</i> , <i>Linn.</i>	A.
2 <i>Oldenlandia</i> , <i>Linn.</i>		<i>rudis</i> , <i>E.M.</i>	AB.
<i>amatymbica</i> , <i>Kuntze.</i>	AD.	<i>parviflora</i> , <i>Harv.</i>	?
<i>Bojeri</i> , <i>Hiern.</i>	Z.	sp. (<i>Stylocoryne cuspidata</i> , <i>E.M.</i>)	?
<i>caffra</i> , <i>E. & Z.</i>	B.		
<i>cephalotes</i> , <i>Kuntze.</i>	A.		
<i>chlorophylla</i> , <i>Kuntze.</i>	AB.	7 <i>Gardenia</i> , <i>Linn.</i>	
<i>corymbosa</i> , <i>Lam.</i>	?	<i>citriodora</i> , <i>Hook.</i>	A.
<i>decumbens</i> , <i>Hiern.</i>	A.	<i>cornuta</i> , <i>Hemsl.</i>	Z.
<i>Heynei</i> , <i>R. Br.</i>	BZ.	<i>Gerrardiana</i> , <i>H. & S.</i>	A.
<i>hirtula</i> , <i>Kuntze.</i>	B.	<i>globosa</i> , <i>Hochst.</i>	AB.
<i>macrophylla</i> , <i>DC.</i>	A.	<i>Neuberia</i> , <i>E. & Z.</i>	AB.
<i>natalensis</i> , <i>Kuntze.</i>	B.	<i>Rothmannia</i> , <i>L.f.</i>	C.
<i>rupicola</i> , "	?	<i>Thunbergia</i> , <i>L.f.</i>	A.
<i>tenella</i> , "	C.		
<i>thymifolia</i> , "	D.	8 <i>Oxyanthus</i> , <i>D.C.</i>	
		<i>Gerrardi</i> , <i>Sond.</i>	B.
		<i>latifolius</i> , <i>Sond.</i>	A.
		<i>natalensis</i> , <i>Sond.</i>	A.
3 <i>Pentas</i> , <i>Benth.</i>	Z.		
<i>Wylei</i> , <i>N.E.B.</i>		9 <i>Kraussia</i> , <i>Harv.</i>	
		<i>floribunda</i> , <i>Harv.</i>	A.
4 <i>Burchellia</i> , <i>R. Br.</i>	AB.	<i>lanceolata</i> , <i>Sond.</i>	AB.
<i>capensis</i> , <i>R. Br.</i>			
5 <i>Webera</i> , <i>Schreb.</i>		10 <i>Tricalysia</i> , <i>A. Rich.</i>	
<i>pavettoides</i> , <i>Bth. & Hook.</i>	B.	<i>Sonderiana</i> , <i>Hiern.</i>	A.

11 <i>Pentanisia</i> , <i>Harv.</i>		sp. (<i>J. M. Wood</i> 320)	B.
<i>variabilis</i> , <i>Harv.</i>	A.	sp. (,, 340, 1048).	B.
,, <i>var. glaucescens</i> .	AB.	sp. (,, 340a).	B.
,, <i>latifolia</i> .	B.	sp. (,, 1196).	B.
		sp. (,, 8855).	
12 <i>Alberta</i> , <i>E. M.</i>		17 <i>Psychotria</i> , <i>Linn.</i>	
<i>magna</i> , <i>E. M.</i>	BC.	<i>capensis</i> , <i>Vatke.</i>	AB.
13 <i>Plectronia</i> , <i>L.</i>		18 <i>Galopina</i> , <i>Thb.</i>	
<i>chamaedendrum</i> , <i>O. Kuntze.</i>	?	<i>circaeoides</i> , <i>Thb.</i>	D.
<i>ciliata</i> , <i>Sond.</i>	B.	<i>oxyspermum</i> , <i>Steud.</i>	AB.
<i>locuples</i> , <i>K. Schinz.</i>	A.	19 <i>Anthospermum</i> , <i>Linn.</i>	
<i>pauciflora</i> , <i>Klotzsch.</i>	?	<i>calycophyllum</i> , <i>Sond.</i>	?
<i>spinosa</i> , <i>Klotzsch.</i>	A.	<i>hispidulum</i> , <i>E. M.</i>	B.
<i>ventosa</i> , <i>L.</i>	AB.	<i>humile</i> , <i>N. E. B.</i>	F.
sp. (<i>Canthium Gueinzii</i> , <i>Sond.</i>)	B.	<i>lanceolatum</i> , <i>Thb.</i>	AB.
sp. (<i>Canthium obovatum</i> , <i>Kl.</i>)	AB.	<i>pumilum</i> , <i>Sond.</i>	D.
sp. (<i>J. M. Wood</i> , 1573).	B.	<i>rigidum</i> , <i>E. & Z.</i>	E.
		<i>rubricaule</i> , <i>K. Schum.</i>	Z
14 <i>Vangueria</i> , <i>Juss.</i>		20 <i>Hydrophylax</i> , <i>Linn.</i>	
<i>infausta</i> , <i>Burch.</i>	A-C.	<i>carnosa</i> , <i>Sond.</i>	?
<i>lasiantha</i> , <i>Sond.</i>	A-B.	21 <i>Spermacoce</i> , <i>Linn.</i>	
<i>latifolia</i> , <i>Sond.</i>	A-B.	<i>natalensis</i> , <i>Hochst.</i>	B.
<i>macrocalyx</i> , <i>Sond.</i>	B.	22 <i>Mitracarpum</i> , <i>Zuccarini.</i>	
<i>venosa</i> , <i>Sond.</i>	?	<i>Dregeanum</i> , <i>E. M.</i>	AB.
<i>pygmaea</i> , <i>Schl.</i>	C.	23 <i>Richardsonia</i> , <i>Kunth.</i>	
15 <i>Fadogia</i> , <i>Schweinfurth.</i>		<i>pilosa</i> , <i>H. B. & K.</i>	AB.
<i>humilis</i> , <i>Wood & Evans.</i>	F.	24 <i>Rubia</i> , <i>Linn.</i>	
16 <i>Pavetta</i> , <i>Linn.</i>		<i>cordifolia</i> , <i>Linn.</i>	AB.
<i>assimilis</i> , <i>Sond.</i>	D.	25 <i>Galium</i> , <i>Linn.</i>	
<i>caffra</i> , <i>Thb.</i>	?	<i>aparine</i> , <i>Linn.</i>	E.
<i>Cooperi</i> , <i>Harv. & Sond.</i>	CD.	<i>garipense</i> , <i>Sond.</i>	D.
<i>disarticulata</i> , <i>N. E. B.</i>	Z.	<i>horridum</i> , <i>Thb.</i>	?
<i>edentula</i> , <i>Sond.</i>	?	<i>rotundifolium</i> , <i>L.</i>	E.
<i>Gerrardi</i> , <i>Harv. MSS.</i>	A.	<i>subvillosum</i> , <i>Sond.</i>	D.
<i>lanceolata</i> , <i>Eck.</i>	A.		
<i>natalensis</i> , <i>Sond.</i>	B.		
<i>obovata</i> , <i>E. M.</i>	A.		

ORDER LXXXV. VALERIANEÆ.

A small family whose members inhabit chiefly temperate and cold countries, few only reaching to warmer climates. Valerian is produced

by *Valeriana officinalis*, and one or two other species, and is a valuable antispasmodic. Celtic Nard is yielded by *Valeriana celtica* and *V. Saliunca*. Their roots are used medicinally and to scent baths. Both species are natives of the higher regions of Styria and Carinthia. Spikenard is the product of *Nardostachys Jatamansi*, and the young leaves of some of the Valerianellas are used as salad. Our species is of no known value.

Number of species about 300.

Herb with imparipinnate leaves, and pinky flowers. VALERIANA.

1 *Valeriana*, *Linn.*
capensis, *Thb.* B-E.

ORDER LXXXVI. DIPSACEÆ.

A small Order of temperate and warm countries, containing but few plants of value. Some of them are used medicinally, and some are cultivated for ornament, while the heads of *Dipsacus fullorum*, the Fuller's Teazel are used for carding cloth. Our species are of no value.

Number of species probably not much exceeding 100.

(EX. TEAZEL. SCABIOUS.)

Involucral scales in several rows. Calyx cup-like or discoid.

CEPHALARIA.

Involucral scales sub 2-seriate. Calyx crowned with 5 bristles.

SCABIOSA.

LIST OF SPECIES.

1 <i>Cephalaria</i> , <i>Schrad.</i>	2 <i>Scabiosa</i> , <i>Linn.</i>	
<i>attenuata</i> , <i>R. & S.</i>	<i>A-E.</i>	<i>africana</i> , <i>Linn.</i>
<i>rigida</i> , <i>R. & S.</i>	?	<i>columbaria</i> , <i>Linn.</i>
<i>ustulata</i> , <i>R. & S.</i>	<i>C.</i>	„ <i>var. dissecta</i> . <i>F.</i>

ORDER LXXXVIII. COMPOSITÆ.

This is by far the largest family of flowering plants in the vegetable Kingdom, and though in nearly all cases the connection of the different plants to the family is easily seen, referring them to their respective genera is frequently very difficult.

Space will not allow more than an enumeration of a few of the more prominent plants which have useful properties. Wormwood, Southernwood, and Tarragon are different species of *Artemisia*, the Tansy is *Pyrethrum tanacetum*, the well-known "Persian Insect Powder" consists of the dried leaves of *Pyrethrum cinerarifolium*, and of some other closely allied species. Arnica is derived from *Arnica montana*. Guaco, a supposed remedy for the bites of snakes is from

Mikania guaco, Coltsfoot is a Tussilago, and Safflower *Carthamus tinctorius*. Chicory is the dried root of *Cichorium Intybus*, and its blanched leaves also are eaten. Salsafy is *Tragopogon porrifolius*, the Jerusalem Artichoke is *Helianthus tuberosus*, and the common Artichoke, *Cynara scolymus*. The seeds of many species yield oils, some of which are said to be equal in flavour to Olive oil. Amongst our indigenous species the timber of *Brachylæna discolor* and some other species, and also of *Tarchonanthus camphoratus* are said to be good, but the trees are too small to render them of much value. The leaves of *Athrixia phylloides* were in the early days of the colony used as a substitute for tea, and the leaves of *Bidens pilosa*, better known as "Black Jack," are said to be useful in diarrhoea.

Number of species verging on to 10,000, though many more than this are enumerated by authors.

KEY TO TRIBES.

Heads discoid, or corollas lingulate.	1
Heads discoid or radiate. Anthers tailed.	2
Heads discoid or radiate. Anthers obtuse, sagittate or mucronate at base.	3
I Florets tubular. Style arms long, subulate, minutely downy on outer surface. Leaves alternate.	VERNONIACEÆ.
1 Florets tubular. Style arms long, subterete, granular on outer surface. Leaves usually opposite, rarely alternate.	EUPATORIACEÆ.
1 Florets strap-shaped, truncate, 5-toothed. Style arms filiform, pubescent on outer surface.	CICHORACEÆ.
2 Style arms linear, obtuse. Corollas of perfect florets tubular.	INULOIDEÆ.
2 Style arms shortly rounded or truncate. Corollas bilabiate or deeply 5-cleft.	MUTISACEÆ.
3 Style arms flattened, without appendage.	ASTEROIDEÆ.
3 Style arms truncate or appendiculate.	4
4 Pappus of many fine hairs (in <i>Gamolepis</i> absent).	SENECIONIDEÆ.
4 Pappus coroniform, or of short scales.	ANTHEMIDEÆ.
4 Pappus cup-shaped, of 1-4 bristles (or absent in <i>Xanthium</i> and <i>Siegesbeckia</i>). Receptacle scaly.	HELIANTHOIDEÆ.
4 Pappus absent (occasionally in <i>Venidium</i>) or of membranous scales. Involucral scales in many series.	ARCTOTIDEÆ.
4 Pappus absent. Heads radiate. Involucral scales in 1-2 series.	CALENDULACEÆ.

KEY TO GENERA.

VERNONIACEÆ.

Pappus a small, fleshy, entire ring.

ETHULIA.

Pappus bristle-shaped.

VERNONIA.

EUPATORIACEÆ.

Heads 4-flowered. Pappus of many slender bristles.

MIKANIA.

Heads many-flowered. Pappus of 5-10 broad, toothed scales.

AGERATUM.

Heads many-flowered. Pappus of 3-5 gland-tipped bristles.

ADENOSTEMMA.

ASTEROIDEÆ.

Heads conspicuously radiate, rays never yellow.

1

Heads conspicuously radiate, rays yellow. Pappus bristly, 1-seriate.

NIDORELLA.

Heads either discoid or imperfectly radiate, marginal florets filiform with imperfect rays. Pappus single, bristle-shaped.

2

Heads discoid, all florets tubular and perfect.

3

1 Pappus bristles rough, in 2 or more series.

ASTER.

1 Pappus bristles rough, in 1 series.

FELICIA.

1 All florets without pappus. Leaves pinnatifid.

GARULEUM.

2 Rays white, disk yellow. Erect. Involucral bracts sub-2-seriate

ERIGERON.

2 Rays and disk yellow. Erect. Involucral bracts sub-2-seriate.

NIDORELLA.

2 Rays and disk yellow. Climber. Involucral bracts in several rows.

MICROGLOSSA.

2 Marginal florets in a single row. Leaves heath-like.

NOLLETTIA.

2 Marginal florets in many rows. Anthers not tailed. Receptacle flattish.

CONYZA.

2 Marginal florets in many rows. Anthers not tailed. Receptacle conical.

DICHOCEPHALA.

3 Pappus uniseriate, deciduous.

CHRYSOCOMA.

3 Pappus in 2-3 series, persistent.

HETEROMMA.

INUOIDEÆ.

Heads discoid, dioecious.

1

Heads androgynous.

2

Heads androgynous or homogamous.

3

Heads heterogamous or homogamous.

4

1 Achenes woolly. Pappus none.

TARCHONANTHUS.

1 Achenes pubescent. Pappus copious, setose.

BRACHYLÆNA.

2 Pappus bristle-shaped, copious. Anthers tailed.

BLUMEA.

2 Pappus bristle-shaped, copious. Anthers not tailed.

LAGGERA.

2 Pappus in marginal florets absent, in disk florets scaly.	DENEKIA.
2 Pappus none. Heads compound.	SPHÆRANTHUS.
3 Pappus in marginal florets none, in disk florets of 5-6 bristles, which are barbellate at apex.	AMPHIDOXA.
3 Pappus in one row. Marginal florets in one row.	HELICHRYSUM.
3 Pappus in one row. Marginal florets 3-6, disk florets about 15, all fertile.	CASSINIA.
3 Pappus scabrous. Marginal florets 3-6, disk florets 1-2, all fertile.	ACHYROCLINE.
3 Pappus in two rows. Involucre squarrose.	LEONTONYX.
3 Pappus copious, in one row. Involucre hemispherical.	BOJERIA.
3 Pappus copious, in one row. Marginal florets in many rows.	GNAPHALIUM.
3 Pappus scanty, plumose. Marginal florets hidden in axils of outermost involucral scales.	PETALACTELLA.
4 Receptacle with or without palae.	5
4 Receptacle without palae.	6
4 Receptacle with palae.	7
5 Receptacle nude. Heads 1-flowered.	STOEBE.
5 Receptacle nude Heads many flowered.	METALASIA.
5 Receptacle fimbriiferous. Leaves fascicled, hispid.	NESTLERA.
5 Receptacle paleaceous. Leaves solitary, glabrous.	RELHANIA.
6 Style arms truncate.	8
6 Style arms rotundate.	9
7 Pappus of 2-3 keeled scales	CALLILEPIS.
7 Pappus of 10-16 scales, all or half of them awned.	GEIGERIA.
8 Perfect florets sterile	MACOWANIA.
8 All florets fertile.	ATHRIXIA.
9 Heads heterogamous Pappus in two rows.	PULICARIA.
9 Heads heterogamous. Pappus in many rows.	PRINTZIA.

HELIANTHOIDEÆ.

Heads many-flowered, small	Perfect florets with undivided styles. Receptacle paleaceous.	PARTHENIUM.
Heads unisexual, monoecious		XANTHIUM.
Heads heterogamous, radiate.	Receptacle conical or cylindrical.	ZINNIA.
Heads heterogamous, radiate	Receptacle flat or convex.	1
1 Inner involucral scales embracing the achenes.		SIEGESBECKIA.
1 Inner involucral scales free. Receptacle flat, narrow.		ECLIPTA.
1 Inner involucral scales free. Pappus of 2-4 rigid bristles.		BIDENS.
1 Inner involucral scales free. Pappus feathery.		TRIDAX.
1 Palæ of receptacle embracing the achenes.		2

2 Rays yellow. Achenes thick, rounded at apex.
 2 Rays yellow. Achenes truncate or convex at apex.
 2 Rays white. Achenes ciliate.

WEDELIA.
 MELANTHERA.
 SPILANTHES.

ANTHEMIDEÆ.

Reeptacle paleaceous.	1
Reeptacle nude or honeycombed.	2
1 Heads discoid.	ATHANASIA.
1 Heads radiate.	EUMORPHIA.
2 Heads radiate. Achenes equal or 5-10 ribbed.	CHRYSANTHEMUM.
2 Heads radiate. Achenes 3-5 ribbed on inner face.	
2 Heads discoid. Involucral bracts in 1-2 series.	MATRICARIA.
2 Heads discoid. Involucral bracts many seriate.	
3 Peduncles swollen at apex.	CENIA.
3 Peduncles not swollen at apex.	COTULA.
4 Perfects florets 4-toothed. Reeptacle convex.	SCHISTOSTEPHİUM.
4 Perfect florets 5-toothed. Heads racemose.	ARTEMISIA.
4 Perfect florets 5-toothed. Heads corymbose.	
5 Achenes all 5-10 ribbed.	GYMNOPENTZIA.
5 Achenes all 5-ribbed.	PENTZIA.

SENECIONIDEÆ.

Involucral bracts herbaceous, free nearly or quite to base.	1
Involucral bracts connate in a cup at base.	2
1 Involucral bracts crested and winged.	LOPHOLENA.
1 Style arms slender, subulate, hispid.	GYNURA.
1 Achenes of ray, or all, dorsally compressed.	CINERARIA.
1 Achenes 5-10-ribbed, glabrous or villous. Disk florets, fertile.	SENECIO.
1 Achenes 5-10-ribbed, glabrous or villous. Disk florets, sterile.	OTHONNOPSIS.
2 Styles bifid. Pappus slender. Achenes 10-ribbed.	EURYOPS.
2 Styles bifid. Pappus none. Achenes 5-10-ribbed.	GAMOLEPIS.
2 Styles entire. Pappus copious. Achenes oval, in disk florets abortive.	OTHONNA.

CALENDULACEÆ.

Achenes of ray 3-angled, of disk compressed, 2-winged.	DIMORPHOTHECA.
Achenes polymorphous often in same head. Small annual.	OLIGOCARPUS.
Achenes of ray 3-angled, of disk barren.	TRIPTERIS.
Achenes of ray nut-like, hard, glabrous.	OSTEOSPERMUM.

ARCTOTIDEÆ.

Involucral bracts free or nearly so. Receptacle paleaceous.	1
Involucral bracts connate at base. Receptacle nude or honeycombed.	2
1 Pappus biseriate, outer of 5 spirally rolled scales, inner of 5 bristles.	URSINIA.
1 Pappus of 7-9 white, linear acuminate, entire scales.	PLATYCARPHA.
2 Pappus acuminate, diaphanous.	HAPLOCARPHA.
2 Pappus none, or of 4 minute scales.	VENIDIUM.
2 Pappus of ray florets absent.	CRYPTOSTEMMA.
2 Pappus of many toothed scales. Achenes very villous.	GAZANIA.
2 Pappus 2-seriate, toothed at apex. Leaves usually spinous.	BERKHEYA.

MUTISACEÆ.

Achenes densely villous. Pappus plumose.	DICOMA.
Achenes glabrous. Pappus of 3-5 unequal scales.	ANISOCHÆTA.
Achenes beaked. Pappus of rough bristles.	GERBE'A.

CICHORACEÆ.

Pappus plumose. Central achenes beaked.	HYPOCHÆRIS.
Pappus bristly. Achenes long beaked.	LACTUCA.
Pappus bristly. Achenes beakless, or very shortly beaked	1
1 Achenes 4-5 angled, shortly beaked. Stems trailing	LAUNEA.
1 Achenes 10-20 ribbed, shortly beaked or narrowed at apex,	CREPIS.
1 Achenes compressed, beakless. Plant erect, branching.	SONCHUS.
1 Achenes 5-angled, beakless. Leaves radical, rosulate.	HIERACIUM.

LIST OF SPECIES.

1 <i>Ethulia</i> , Linn.	Gerrardi, <i>Harv.</i>	D.
conyzoides, Linn.	A-B. hirsuta, <i>Sch. Bip.</i>	AB.
2 <i>Vernonia</i> , Schreb.	Kraussii, <i>Sch. Bip.</i>	A-D.
angulifolia, D.C.	mespilifolia, <i>Less.</i>	A.
anisochaetoides, Sond.	monocephala, <i>Harv.</i>	B.
collina, <i>Schltr.</i>	natalensis, <i>Sch. Bip.</i>	A-D.
corymbosa, <i>Less.</i>	oligocephala, <i>Klatt.</i>	B.
Dregeana, <i>Sch. Bip.</i>	AB. pinifolia, <i>Less.</i>	A.
	AB. podocoma, <i>Sch. Bip.</i>	?

Vernonia, *Continued.*

senegalensis, <i>Less.</i>	Z.	lutea, <i>N. E. Brown.</i>	Z.
stipulacea, <i>Klatt.</i>	F.	muricata, <i>Nees.</i>	D.
Sutherlandi, <i>Harv.</i>	D.	pinnatifida, <i>Wood & Evans.</i>	F.
vernonella, <i>Harv.</i>	A.	11 <i>Erigeron, Linn.</i>	
Woodii, <i>Hoffm.</i>	A.		
sp. (<i>Wood</i> 342).	B.	canadense, <i>Linn.</i>	A-C.
sp. (<i>Wood</i> 7463).	F.		
3 <i>Anisochæta, D.C.</i>		12 <i>Microglossa, D.C.</i>	
<i>mikanoides, D.C.</i>	C.	mespilifolia, <i>Bth.</i>	B.
4 <i>Adenostemma, Forst.</i>			
<i>cafrum, D.C.</i>	A.	13 <i>Nidorella, Cass.</i>	
<i>Dregei, D.C.</i>	B.	anomala, <i>Steetz.</i>	C-D.
5 <i>Ageratum, Linn.</i>		auriculata, <i>D.C.</i>	B.
<i>conyzoides, Linn.</i>	AB.	depauperata, <i>Harv.</i>	D.
6 <i>Mikania, Willd.</i>		fœtida, <i>D.C.</i>	B.
<i>capensis, D.C.</i>	AB.	hottentotica, <i>D.C.</i>	Z.
<i>natalensis, D.C.</i>	?	linifolia, <i>D.C.</i>	
7 <i>Dichrocephala, L'Herit.</i>		mespilifolia, <i>D.C.</i>	A-B.
<i>latifolia, D.C.</i>	?	resedæfolia, <i>D.C.</i>	B.
8 <i>Garuleum, Cass.</i>		14 <i>Conyza, Less.</i>	
<i>latifolium, Harv.</i>	B.	ægyptiaca, <i>Ait.</i>	B.
<i>pinnatifidum, D.C.</i>	E.	incisa, <i>Ait.</i>	A-C.
<i>Woodii, Schinz.</i>	F.	ivæfolia, <i>Less.</i>	A-C.
sp. (<i>Wood</i> 4385).	E.	obscura, <i>D.C.</i>	B.
9 <i>Aster, Linn.</i>		pinnatiflobata, <i>D.C.</i>	B-E.
<i>asper, Less.</i>	A-E.	podocephala, <i>D.C.</i>	B.
<i>erigeroides, Harv.</i>	A-D.	15 <i>Nollettia, Cass.</i>	
<i>filifolius, Vent.</i>	D.	rarifolia, <i>Steetz.</i>	D.
<i>hispidus, Baker.</i>	A-E.	16 <i>Chrysocoma, Linn.</i>	
<i>natalensis, Harv.</i>	E.	tenuifolia, <i>Berg.</i>	B-D.
<i>perfoliatus, Oliv.</i>	F.	17 <i>Heteromma, Benth.</i>	
<i>quinquenervius, Klatt.</i>	E.	decurrans, <i>Bth.</i>	E.
<i>serrulatus, Harv.</i>	Z.	simplicifolia, <i>Wood & Evans.</i>	F.
<i>uliginosus, W. & E.</i>		18 <i>Brachylæna, R. Br.</i>	
<i>Woodii, Klatt.</i>	D-E.	dentata, <i>D.C.</i>	C.
sp. (<i>Evans</i> 739).		discolor, <i>D.C.</i>	A.
10 <i>Felicia, Cass.</i>		elliptica, <i>Less.</i>	B.
<i>drakensbergensis, Wood & Evans.</i>	F.	racemosa, <i>Less.</i>	?
<i>linearis, N. E. Brown.</i>	F.	uniflora, <i>Harv.</i>	AB.
<i>lingulata, Klatt.</i>	?	sp. (<i>Wood</i> 936, 4609).	
		19 <i>Tarchonanthus, Linn.</i>	
		camphoratus, <i>Linn.</i>	CD.
		minor, <i>Less.</i>	Z.
		trilobus, <i>D.C.</i>	B.

20. <i>Blumea</i> , <i>D.C.</i>		ericæfolium, <i>Less</i>	B
<i>lacera</i> , <i>D.C.</i>	AB.	falcatum, <i>Klatt.</i>	?
<i>natalensis</i> , <i>Sch. Bip.</i>	A.	floccosum, <i>Klatt.</i>	A.
	AB.	fœtidum, <i>Cass.</i>	A-B.
21 <i>Laggera</i> , <i>Sch. Bip.</i>	AB.	fulgidum, <i>Willd.</i>	A-C.
<i>alata</i> , <i>Sch. Bip.</i>	AB.	fulvum, <i>N. E. Brown.</i>	F.
		Gerrardi, <i>Harv.</i>	A.
22 <i>Denekia</i> , <i>Thb.</i>		griseum, <i>Sond.</i>	?
<i>capensis</i> , <i>Thb.</i>	A-F.	glomeratum, <i>Klatt.</i>	?
<i>glabrata</i> , <i>D.C.</i>	D.	hypoleucum, <i>Harv.</i>	F.
		infaustum, <i>Wood & Evans.</i>	F.
23 <i>Sphæranthus</i> , <i>Linn.</i>		Kraussii, <i>Sch. Bip.</i>	AB.
<i>peduncularis</i> , <i>D.C.</i>	AB.	Kuntzei, <i>O. Hoff.</i>	E.
		latifolium, <i>Less.</i>	AB.
24 <i>Amphidoxa</i> , <i>D.C.</i>	B.	leiopodium, <i>D.C.</i>	B.
<i>gnaphaloides</i> , <i>D.C.</i>		leptolepis, <i>D.C.</i>	?
		longifolium, <i>D.C.</i>	B.
25 <i>Achyrocline</i> , <i>Less.</i>	B.	marginatum, <i>D.C.</i>	D-E.
sp. (<i>J. M. Wood</i> 523).		miconiæfolium, <i>D.C.</i>	B.
		Mundtii, <i>Harv.</i>	?
26 <i>Gnaphalium</i> , <i>Linn.</i>		nanum, <i>Klatt.</i>	F.
<i>luteo-album</i> , <i>Linn.</i>	A-B.	natalitium, <i>D.C.</i>	B.
<i>purpureum</i> , <i>Linn.</i>	A-B.	nudifolium, <i>Less.</i>	B.
<i>undulatum</i> , <i>Linn.</i>	B.	oreophilum, <i>Klatt.</i>	B.
		pannosum, <i>D.C.</i>	AB.
		parviflorum, <i>Klatt.</i>	C.
27 <i>Helichrysum</i> , <i>Gærtn.</i>		polycladum, <i>Klatt.</i>	F.
<i>adenocarpum</i> , <i>D.C.</i>	A-F.	populifolium, <i>D.C.</i>	B.
<i>album</i> , <i>N. E. Brown.</i>	F.	pulvinatum, <i>O. Hoffm.</i>	F.
<i>alloides</i> , <i>Less.</i>	?	quinquenerve, <i>Less.</i>	B.
<i>amplum</i> , <i>O. Hoffm.</i>	B.	retortoides, <i>N.E.B.</i>	F.
<i>appendiculatum</i> , <i>Less.</i>	B.	regulosum, <i>Less.</i>	A.
<i>araneosum</i> , <i>Klatt.</i>	C.	serpyllifolium, <i>Less.</i>	B-D.
<i>argyrosphaerum</i> , <i>D.C.</i>	?	setosum, <i>Harv.</i>	Z.
<i>argyrolepis</i> , <i>MacOwan.</i>	C.	simillum, <i>D.C.</i>	BC.
<i>athrixifolium</i> , <i>O. Hoff.</i>	C.	squammosum, <i>Thb.</i>	A-D.
<i>aureonitens</i> , <i>Sch. Bip.</i>	B.	stenopterum, <i>D.C.</i>	A.
<i>auriculatum</i> , <i>Less.</i>	?	subglomeratum, <i>Less.</i>	B-F.
<i>cæspititium</i> , <i>Sond.</i>	C-D.	Sutherlandi, <i>Harv.</i>	B-F.
<i>callicomum</i> , <i>Harv.</i>	D.	teretifolium, <i>Less.</i>	A.
<i>capillaceum</i> , <i>Less.</i>	C.	Thapsus, <i>O. Hoffm.</i>	D.
<i>cephaloideum</i> , <i>D.C.</i>	A-C.	trilineatum, <i>D.C.</i>	E-F.
<i>comosum</i> , <i>Sch. Bip.</i>	C.	umbraculigerum, <i>Less.</i>	B-D.
<i>confertum</i> , <i>N. E. Brown.</i>	F.	Woodii, <i>N. E. Brown.</i>	B.
<i>confertifolium</i> , <i>Klatt.</i>	F.	sp. (<i>Wood</i> , 3888).	Z.
<i>Cooperi</i> , <i>Harv.</i>	B.	„ („, 9727).	F.
<i>cymosum</i> , <i>Less.</i>	A-B.	„ („, 8973).	B-F.
<i>declinatum</i> , <i>Less.</i>	?	„ („, 4759).	E.
<i>decorum</i> , <i>D.C.</i>	AB.	„ („, 9620).	F.

Helichrysum, <i>Continued.</i>			
sp. (<i>Wood</i> , 3596).	E.	asteroides, <i>Schltr.</i>	D-E.
„ („ 4557).	F.	densifolia, <i>Wood & Evans.</i>	C-D.
„ („ 1574).	B.	laxa, <i>N. E. Brown.</i>	F.
„ („ 3079).	B-C.	pyrifolia, <i>Less.</i>	A-B.
„ (<i>Evans</i> , 516).	E-F.		
„ („ 660).	B-C.		
„ (<i>Herb.</i> , 6006).	E.		
28 Leontonyx, <i>Cass.</i>			
glomeratus, <i>D.C.</i>	C-Z.	39 Pulicaria, <i>Gaertn.</i>	
squarrosus, <i>D.C.</i>	AB.	capensis, <i>D.C.</i>	A.
29 Cassinia, <i>R. Br.</i>			
phylicifolia, <i>D.C.</i>	A.	40 Geigeria, <i>Griesb.</i>	
30 Metalasia, <i>R. Br.</i>		Burkei, <i>Harv.</i>	Z.
muricata, <i>Less.</i>	E.	passerinoides, <i>Harv.</i>	Z.
31 Nestlera, <i>Spreng.</i>		protensa, <i>Harv.</i>	Z.
virgata, <i>N. E. Brown.</i>	F.	natalensis, <i>Wood & Evans.</i>	D-E.
32 Relhania, <i>L'Her.</i>	AB.	rivularis, <i>Wood & Evans.</i>	E.
pungens, <i>L'Her.</i>	AB.		
33 Macowania, <i>Oliv.</i>		41 Callilepis, <i>D.C.</i>	
glandulosa, <i>N. E. Brown.</i>	F.	laureola, <i>D.C.</i>	A-C.
34 Petalactella, <i>N. E. Brown.</i>			
Woodii, <i>N. E. Brown.</i>	F.	42 Parthenium, <i>Linn.</i>	A.
35 Stoebe, <i>Linn.</i>		hysterophorus, <i>Linn.</i>	
cinerea, <i>Thb.</i>	BC.		
tortilis, <i>D.C.</i>	B.	43 Xanthium, <i>Linn.</i>	
36 Athrixia, <i>Ker.</i>		spinosum, <i>Linn.</i>	A-C.
angustissima, <i>D.C.</i>	F.	strumarium, <i>Linn.</i>	AB.
arachnoidea, <i>Wood & Evans.</i>	F.		
asteroides, <i>Bol. & Schl.</i>	C.	44 Zinnia, <i>Linn.</i>	
elata, <i>Sond.</i>	E-F.	multiflora, <i>Linn.</i>	BC.
fontana, <i>MacOwan.</i>	B-C.		
Gerrardi, <i>Harv.</i>	F.	45 Siegesbeckia, <i>Linn.</i>	
phylicoides, <i>D.C.</i>	A-D.	orientalis, <i>Linn.</i>	A.
pinifolia, <i>N. E. Brown.</i>	F.		
n. sp. (<i>Evans</i> , 513).	E-F.	46 Eclipta, <i>Linn.</i>	
37 Bojeria, <i>D.C.</i>		erecta, <i>Linn.</i>	A.
lanceolata, <i>Bth.</i>	Z.		
		47 Wedelia, <i>Jacq.</i>	
		natalensis, <i>Sond.</i>	B.
		48 Melanthera, <i>Rohr.</i>	
		Brownii, <i>Sch. Bip.</i>	AB.
		49 Spilanthes, <i>Linn.</i>	
		africana, <i>D.C.</i>	AB.
		50 Bidens, <i>Linn.</i>	
		bipinnata, <i>Linn.</i>	B.
		pilosa, <i>Linn.</i>	A-E.
		„ var. leucantha, <i>Willd.</i>	BC.
		51 Tridax, <i>Linn.</i>	
		procumbens, <i>Linn.</i>	A.

52 <i>Athanasia</i> , <i>Linn.</i>		63 <i>Gynura</i> , <i>Cassini</i> .
acerosa, <i>Harv.</i>	A-C.	cernua, <i>Bth.</i>
var. (<i>J. M. Wood</i> , 3969).	Z.	BC.
coronopifolia, <i>Harv.</i>	D.	
Dregeana, <i>Harv.</i>	C.	C.
leucoclada, <i>Harv</i>	B.	BC,
montana, <i>W. & E.</i>	E-F.	?
punctata, <i>Harv.</i>	B.	?
tridens, <i>Oliv.</i>	D.	?
sp. (<i>Evans</i> 662).	F.	D.
		?
53 <i>Eumorphia</i> , <i>D.C.</i>		
sericea, <i>Wood & Evans.</i>	F.	
54 <i>Chrysanthemum</i> , <i>Linn.</i>		
osmitoides, <i>Harv.</i>	?	
55 <i>Matricaria</i> , <i>Linn.</i>		
nigellæfolia, <i>D.C.</i>	A-C.	
zuurbergensis, <i>Oliv.</i>	DE.	
56 <i>Cotula</i> , <i>Linn.</i>		
anthemoides, <i>Linn.</i>	?	
bipinnata, <i>Thb.</i>	A.	
57 <i>Oenia</i> , <i>Juss.</i>		
hispida, <i>Bth. & Hk.</i>	C-D.	
58 <i>Schistostephium</i> , <i>Less.</i>		
crataegifolium, <i>Fenzl.</i>	A-C.	
rotundifolium, <i>Fenzl.</i>	BZ.	
sp. (<i>Tanacetum griseum</i>). A-C.		
sp. (", <i>heptalobum</i>). B.		
sp. (", <i>hippiseifolium</i>). D.		
59 <i>Gymnopentzia</i> , <i>Benth.</i>		
pilifera, <i>N. E. Brown.</i>	F.	
60 <i>Pentzia</i> , <i>Thb.</i>		
asteroides, <i>Schltr.</i>		
Cooperi, <i>Harv.</i>	F.	
pinnatifida, <i>Oliv.</i>	BC.	
virgata, <i>Less.</i>	?	
61 <i>Artemisia</i> , <i>Linn.</i>		
afra, <i>Jacq.</i>	A-D.	
62 <i>Lepholaena</i> , <i>D.C.</i>		
Dregeana, <i>D.C.</i>	A.	
platyphylla, <i>Bth.</i>	BC-Z.	

Senecio, *Continued.*

juniperinus, <i>Linn.</i>	B.
Kuntzei, <i>O. Hoffm.</i>	A.
lanceus, <i>Ait.</i>	AB.
latifolius, <i>D.C.</i>	?
launayæfolius, <i>O. Hoff.</i>	B.
macrocephalus, <i>D.C.</i>	?
macroglossus, <i>D.C.</i>	D.
mikanoides, <i>Ott.</i>	?
napifolius, <i>MacOwan.</i>	A-C.
othonnæflorus, <i>D.C.</i>	BZ.
oxyodontus, <i>D.C.</i>	A-C.
oxyriæfolius, <i>D.C.</i>	BC,
pandurifolius, <i>Harv.</i>	A.
paniculatus, <i>Berg.</i>	E.
paucicalyculatus, <i>Klatt.</i>	B.
pellucidus, <i>D.C.</i>	A-C.
picridifolius, <i>D.C.</i>	F.
prostratus, <i>Klatt.</i>	A-B.
pterophyllus, <i>D.C.</i>	A-B.
„ var. apterus.	C.
pullus, <i>Klatt.</i>	B.
purpureus, <i>Linn.</i>	B.
quinquelobus, <i>Linn.</i>	B.
„ var. helminthoideus.	B.
rhomboideus, <i>Harv.</i>	B.
rhyncholaenus, <i>D.C.</i>	B-D.
rigidus, <i>Linn.</i>	D.
ruderalis, <i>Harv.</i>	A.
Sandersoni, <i>Harv.</i>	B.
segmentatus, <i>Oliv.</i>	B.
serra, <i>Sond.</i>	?
seminivea, <i>Wood & Evans.</i>	F.
serratus, <i>Sond.</i>	A-Z.
serratuloides, <i>D.C.</i>	A-C.
speciosus, <i>Willd.</i>	A-C.
subcoriaceous, <i>Schltr.</i>	C.
subruberfolius, <i>O. Hoff.</i>	A-B.
tamoides, <i>D.C.</i>	F.
tanacetoides, <i>Sond.</i>	?
thyrsoides, <i>D.C.</i>	F.
trachylepus, <i>Klatt.</i>	?
tugensis, <i>Wood & Evans.</i>	F.
Tysoni, <i>MacOwan.</i>	?
venosus, <i>Harv.</i>	B-C.
viscidus, <i>N. E. Brown.</i>	B-F.

66 Othonnopsis, *Jaub. et Spach.*

sp. (*Hertia natalensis*, *O. Hoff.*)

73	67 Euryops, <i>Cassini.</i>
	Evansii, <i>Schltr.</i>
	pedunculatus, <i>N. E. Brown.</i> E-F.
	setiloba, <i>N. E. Brown.</i> D.
	tenuissimus, <i>Less.</i> B.
	sp. (<i>Wood</i> , 5879). D-E.
	sp. (<i>Wood</i> , 4185). F.
	sp. (<i>Evans</i> , 514). Z.
	68 Gamolepis, <i>Less.</i>
	debilis, <i>Harv.</i> A-D.
	laxa, <i>Harv.</i> Z.
	69 Othonna, <i>Linn.</i>
	carnosa, <i>Less.</i>
	„ var. discoidea, <i>Oliv.</i> A.
	natalensis, <i>Sch. Bip.</i> BC.
	disticha, <i>N. E. B.</i> ?
	scapigera, <i>Harv.</i> D.
	70 Dimorphotheca, <i>Moench.</i>
	Barberiæ, <i>Harv.</i> F.
	caulescens, <i>Harv.</i> D.
	cuneata, <i>Less.</i> ?
	fruticosa, <i>Less.</i> A.
	71 Tripteris, <i>Less.</i>
	natalensis, <i>Harv.</i> ?
	72 Oligoarpus, <i>Less.</i>
	calendulaceus, <i>Less.</i> D.
	73 Osteospermum, <i>Linn.</i>
	calendulaceum, <i>Harv.</i> ?
	caulescens, <i>Harv.</i> D.
	glaberrimum, <i>O. Hoffm.</i> ?
	grandidentatum, <i>D.C.</i> B.
	helichrysoides, <i>D.C.</i> ?
	herbaceum, <i>Linn.</i> B.
	lanceolatum, <i>D.C.</i> ?
	moniliferum, <i>Linn.</i> A-C.
	muricatum, <i>E.M.</i> DZ.
	nervatum, <i>D.C.</i> BZ.
	sonchifolium, <i>D.C.</i> D.
	sp. (<i>Wood</i> , 9807). Z.
	74 Ursinia, <i>Gaertn.</i>
	alpina, <i>N. E. Brown.</i> E-F.
	apiculata, <i>D.C.</i> ?
	brevicaulis, <i>W. & E.</i> F.

Ursinia, <i>Continued.</i>			
natalensis, <i>N.E.B.</i>	CZ.	sp. (<i>Wood</i> 4411).	C-Z.
punctata, <i>B. & M.</i>	E.	sp. (, 9725).	B-C.
tenuiloba, <i>D.C.</i>	D.	sp. (,).	B-C.
75 Haplocarpha, <i>Less.</i>	DE.	80 Platycarpha, <i>Less.</i>	
scaposa, <i>Harv.</i>		glomerata, <i>Less.</i>	B-D.
76 Cryptostemma, <i>R. Br.</i>	B.	81 Dicoma, <i>Cassini.</i>	
calendulaceum, <i>R. Br.</i>	A.	anomala, <i>Sond.</i>	
niveum, <i>Nichols.</i>		var. <i>cirsoides.</i>	B-D.
77 Venidium, <i>Less.</i>	DE.	var. <i>microcephala.</i>	DE.
arctotooides, <i>Less.</i>		argyrophylla, <i>Oliv.</i>	C.
microcephalum, <i>D.C.</i>	D.	macrocephala, <i>D.C.</i>	D.
78 Gazania, <i>Gaertn.</i>	DE.	sessiliflora, <i>Harv.</i>	?
armerioides, <i>D.C.</i>	F.	speciosa, <i>D.C.</i>	B.
bilabiata, <i>N. E. Brown.</i>	?	Zeyheri, <i>Sond.</i>	Z.
bracteata, <i>N. E. Brown.</i>	?		
cæspitosa, <i>Bolus.</i>	D.	82 Anisochaeta, <i>D.C.</i>	
longiscapa, <i>D.C.</i>	?	mikanoides, <i>D.C.</i>	AB.
serrulata, <i>D.C.</i>	A.		
uniflora, <i>Sims.</i>		83 Gerbera, <i>Gronovius.</i>	
79 Berkheya, <i>Ehrh.</i>	EF.	ambigua, <i>Sch. Bip.</i>	?
bilabiata, <i>N. E. Brown.</i>	?	aurantiaca, <i>Sch. Bip.</i>	C-D.
carlinoides, <i>Schltr.</i>	B-D.	Kraussii, <i>Sch. Bip.</i>	A-E.
debilis, <i>MacOwan.</i>	?	natalensis, <i>Sch. Bip.</i>	A-B.
Evansii, <i>Schltr.</i>	C-D.	parva, <i>N. E. Brown.</i>	F.
incana, <i>Willd.</i>	F.	piloselloides, <i>Cass.</i>	A-E.
latifolia, <i>Wood & Evans.</i>	B.	plantaginea, <i>Harv.</i>	D.
macrocephala, <i>Wood.</i>	A.	tuberosa, <i>Klatt.</i>	B.
maritima, <i>Wood & Evans.</i>		viridifolia, <i>Sch. Bip.</i>	B.
montana, " "	F.	sp. (<i>Wood</i> 4458).	C-D.
setifera, <i>D.C.</i>	B-E.	sp. (<i>Thode</i>).	F.
subulata, <i>Harv.</i>	BZ.		
umbellata, <i>D.C.</i>	AB.	84 Hieracium, <i>Linn.</i>	
sp. (<i>Stobæa acanthopoda</i>).	D.	capense, <i>Linn.</i>	A-E.
sp. (, <i>discolor</i>).	B-D.	var. <i>microcephala.</i>	D.
sp. (, <i>echinacea</i>).	Z.	polyodon, <i>Fries.</i>	B.
sp. (, <i>echinopoda</i> , <i>D.C.</i>)	E.		
sp. (, <i>Gerrardi</i>).	?	85 Crepis, <i>Linn.</i>	
sp. (, <i>insignis</i>).	A.	japonica, <i>Bth.</i>	A.
sp. (, <i>McKenii</i>).	D.		
sp. (, <i>platyptera</i>).	B.	86 Hypochaeris, <i>Linn.</i>	
sp. (, <i>purpurea</i> , <i>D.C.</i>)	AB.	glabra, <i>Linn.</i>	A.
sp. (, <i>rhapontica</i>).	B.	radiata, <i>L.</i>	Z?
sp. (, <i>seminivea</i>).	AB.		
sp. (, <i>speciosa</i>).		87 Lactuca, <i>Linn.</i>	
		capensis, <i>Thb.</i>	A-C.
		goreensis, <i>Sch. Bip.</i>	C.
		indica, <i>Linn.</i>	B.

88 *Sonchus*, *Linn.*

<i>Ecklonianus</i> , <i>D.C.</i>	A.
<i>integrifolius</i> , <i>Harv.</i>	A-B,
<i>oleraceus</i> , <i>Linn.</i>	A-E.
<i>rarifolius</i> , <i>Oliv. & Hiern.</i>	B.
sp. (<i>Wood</i> 1381).	B.

89 *Launea*, *Cassini.*

<i>bellidifolia</i> , <i>Cass.</i>	A.
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ORDER XC. GOODENOVIEÆ.

An almost exclusive Australian Order, with a few in New Zealand and adjacent countries, one species only reaching to Africa. None of the species have any really useful properties, though some are used medicinally in the countries of which they are natives, and the pith of one species, *Scævola Taccada*, is extensively used for making ornaments. Several of the species are in cultivation as ornamental plants in Europe.

Number of species more than 200.

Corolla longitudinally cleft, limb 5 parted.

SCAEVOLA.

1 *Scævola*, *Linn.*

lobelia, *Linn.*

ORDER XCI. CAMPANULACEÆ.

An Order which includes a large number of ornamental plants, such as the Campanulas, or "Canterbury bell," Wahlenbergias, Lobelias and others; but very few have any real economic value. The roots of *Campanula Rapunculus* are eaten, and said to be agreeable and easy of digestion, and others of the genus have been used medicinally. "Indian Tobacco," *Lobelia inflata*, is used medicinally, but it is highly poisonous, as also are several other closely allied plants. Our indigenous species have no known useful properties.

Number of species more than 1000.

Corolla irregular. Anthers connate round the style. *LOBELIA.*

Corolla irregular. Anthers free.

1

Corolla regular or nearly so. Anthers free.

2

1 Petals 5, claws conniving, lobes spreading as a
two-lipped corolla.

CYPHIA.

two-lipped corolla.

ROELLA.

2 Capsule opening by terminal pores.

3.

2 Capsule opening loculicidally at apex.

3 Corolla 4-5 parted to base or nearly so.

LIGHTFOOTIA.

3 Corolla funnel or bell-shaped, 5-fid or 5-lobed.

WAHLENBERGIA.

LIST OF SPECIES.

1 *Lobelia*, *Linn.*

anceps, *Thb.*

A-D.

coronopifolia, *Linn.*

A.

decipiens, *Sond.*

A-E.

Bergiana, *Cham.*

A.

Dregeana, *A. D.C.*

D-F.

cochlearifolia, *Diels.*

Z.

erinoides, *Thb.*

A.

Lobelia, *Continued.*

<i>erinus</i> , <i>Linn.</i>	A-B.
<i>laxa</i> , <i>MacOwan.</i>	D.
<i>leptocarpa</i> , <i>Gressel.</i>	DE.
<i>natalensis</i> , <i>A. D.C.</i>	D.
<i>patula</i> , <i>Linn. var. pteropoda</i> .	B.
<i>Preslia</i> , <i>A. D.C.</i>	D.
<i>scabra</i> , <i>Thb.</i>	A-C. Z.
<i>stellaroides</i> , <i>Bth. & Hk.</i>	A-C.
<i>Vanreenenensis</i> , <i>O. Kuntze.</i>	E-F.
sp. (<i>Wood</i> 8863).	Z.

2 *Oypbia*, *Bergius.*

<i>corylifolia</i> , <i>Harv.</i>	Z.
<i>digitata</i> , <i>Willd.</i>	?
<i>elata</i> , <i>Harv.</i>	B-D.
<i>Gerrardi</i> , <i>Harv.</i>	Z.
<i>heterophylla</i> , <i>Presl.</i>	D.
<i>oblongifolia</i> , <i>Harv. & Sond.</i>	Z.
<i>sylvatica</i> , <i>E. & Z.</i>	?
sp. (<i>Wood</i> 1838).	B-C.
sp. (,, 4271).	C-D.
sp. (,, 4569).	

3 *Roella*, *Linn.*

<i>glomerata</i> , <i>A. D.C.</i>	A.
-----------------------------------	----

4 *Lightfootia*, *L'Herit.*

<i>corymbosa</i> , <i>O. Kuntze.</i>	B.
<i>denticulata</i> , <i>Sond.</i>	C.
<i>glomerata</i> , <i>L.</i>	Z.
<i>Huttoni</i> , <i>Sond.</i>	B.
<i>tenella</i> , <i>A. D.C.</i>	?

5 *Wahlenbergia*, *Schrad.*

<i>arenaria</i> , <i>D.C.</i>	?
<i>caledonica</i> , <i>Sond.</i>	B-D.
<i>capensis</i> , <i>A. D.C.</i>	E.
<i>capillacea</i> , <i>A. D.C.</i>	EZ.
<i>cernua</i> , <i>A. D.C.</i>	?
<i>depressa</i> , <i>Wood & Evans.</i>	F.
<i>epacridea</i> , <i>Sond.</i>	EZ.
<i>montana</i> , <i>D.C.</i>	E.
<i>oppositifolia</i> , <i>A. D.C.</i>	BC.
<i>paucidentata</i> , <i>Schinz.</i>	B.
<i>pinifolia</i> , <i>N. E. Brown.</i>	E.
<i>rivularis</i> , <i>Dietr.</i>	?
<i>undulata</i> , <i>A.D.</i>	A-C.
<i>Zeyheri</i> , <i>E. & Z.</i>	
" " <i>var. natalensis.</i>	B-E.
sp. (<i>Wood</i> 728).	B.
sp. (,, 3407).	B.

ORDER XCIII. ERICACEÆ.

Of this Order we have a few representatives of the genera only, viz., *Erica* and *Phillipia*, while in Cape Colony, which is the headquarters of the genus, several hundred species are found, in addition to which at least eight or ten other genera inhabit different parts of the Cape Colony, none of which find a home in Natal. The Rhododendrons belong to this Order, but none of them are natives of Africa. Some species of the family have medicinal properties and some are poisonous, but none are of much value except as ornamental plants.

(Ex. HEATHS.)

Capsule 4-celled. Stamens free. Sepals 4.	ERICÆ.
Calyx 4-fid, or 4 parted, unequal. Stigma large.	PHILLIPIA.

LIST OF SPECIES.

1 *Erica*, *Linn.*

<i>algida</i> , <i>Bolus.</i>	F.	<i>caffra</i> , <i>Linn.</i>	D.
<i>alopecurus</i> , <i>Harv.</i>	D-F.	<i>caffrorum</i> , <i>Bolus.</i>	BC.
<i>aspalathifolia</i> , <i>Bolus.</i>	BC.	<i>cerinthoides</i> , <i>Linn.</i>	BC.
		<i>Cooperi</i> , <i>Bolus.</i>	BC.

Erica, <i>Continued.</i>			
cubica, <i>Linn.</i>	BC.	Schlechteri, <i>Bolus.</i>	D.
drakensbergensis, <i>Guth & Bol.</i>	E.	sitiens, <i>Kl.</i>	?
frigida, <i>Bolus.</i>	F.	solandra, <i>Andr.</i>	F.
hispidula, <i>L. f.</i>	E.	trichoclada, <i>G. & B.</i>	C.
lasiocarpa, <i>Guth & Bolus.</i>	F.	Woodii, <i>Bolus.</i>	B-E.
natalitia, <i>Bolus.</i>	B.		
Oatesii, <i>R. A. Rolfe.</i>	F.	2 <i>Phillipia, Klotzsch.</i>	
		Evansii, <i>N.E.B.</i>	F.

ORDER XCVIII. PLUMBAGINEÆ,

A small family of cosmopolitan plants. Some species of *Plumbago*, including our members of the family, are cultivated as ornamental plants, as are also a few species of *Statice*, and some species of both of these genera have been used medicinally; but they are not considered to be of much if any value. The name of the Order has been given from the fact that the roots of *Plumbago europaea* contain a caustic colouring matter which leaves a leaden-coloured stain on the skin.

Number of species about 200.

Calyx glandular. Stamens free. Flowers spicate. PLUMBAGO.

LIST OF SPECIES.

1 <i>Plumbago, Linn.</i>		
capensis, <i>Thb.</i>	BC.	
„ var. <i>alba.</i>	D.	
zeyanica, <i>Linn.</i>	D-E.	

ORDER XCIX. PRIMULACEÆ.

Most of the members of this Order are found in temperate regions, and often at high altitudes, few only in tropical and subtropical countries. Many are cultivated for ornament, such as the Primrose, Auricula, Cyclamen, &c., and none are of recognised economic or medicinal value.

Number of species about 250.

(EX. PRIMROSE. PIMPERNEL.)

Ovary free. Stamens glabrous. Capsule opening by 5-10 valves.

LYSIMACHIA.

Ovary free. Stamens hairy. Capsule splitting into 2 hemispheres.

ANAGALLIS.

Ovary half inferior. Capsule opening by 5 valves.

SAMOLUS.

LIST OF SPECIES.

1 <i>Anagallis, Linn.</i>		2 <i>Lysimachia,</i>	
arvensis, <i>Linn.</i>	C.	brachypetala, <i>Schltr.</i>	E.
Huttoni, <i>Harv.</i>	C.	Woodii, <i>Schltr.</i>	E-F.
pumila, var. <i>natalensis, Kunth.</i>	A-B.		

3 *Samolus*, *Linn.*porosus, *Thb.*
Valerandi, *Linn.*A.
A.

ORDER C. MYRSINEÆ.

Chiefly tropical plants, few only being found in temperate regions. Some species of *Ardisia* are in cultivation on account of their brightly-coloured berries. None of the members of the Order are of much, if any economic value.

Number of species about 500.

(EX. CAPE BEECH. ISIDENDE.)

Ovary half or quite inferior.	Corolla 5 lobed.	MÆSA.
Ovary free.	Petals 5, separate.	EMBELIA.
Ovary free.	Corolla 4-5 lobed.	MYRSINE.

LIST OF SPECIES.

1 <i>Mæsa</i> , <i>Forsk.</i>	3 <i>Myrsine</i> , <i>Linn.</i>
alnifolia, <i>Harv.</i>	AB. africana, <i>L.</i>
angolensis, <i>Gilg.</i>	melanophleus, <i>R. Br.</i>
rufescens, <i>A. D. C.</i>	C-E. Gerrardi, <i>Harv.</i>

2 *Embelia*, *Burm.*Kraussii, *Harv.* A.

ORDER CL. SAPOTACEÆ.

A small Order of tropical and subtropical plants, including some which yield eatable fruits, such as the Star Apple (*Chrysophyllum Cainito*), Bullet tree (*Mimusops Balata*), Sapodilla (*Achras sapota*), and others of less note. The Shea butter of West Africa is yielded by *Bassia Parkii*. *Bassia latifolia* is a native of India and bears large fleshy flowers, from which a kind of sugar or "Jaggery" is made, and also an intoxicating spirit, "Arrack," which is much used. Gutta Percha is yielded by *Isonandra gutta*. *Argania sideroxylon* is a remarkable tree found in Morocco. It is said to form branches which bend to the ground and then ascend. The fruit is eaten by cattle and goats. The seeds are afterwards collected, and an oil is extracted from them which is said to equal Olive Oil. One of our indigenous species of *Mimusops* (*Mimusops dispar*) bears an eatable fruit which is much relished by the natives, whose women go long distances for it and carry it to their kraals in quantity. The fruits of *Mimusops marginata* and *Chrysophyllum natalense* are also eatable. *Mimusops caffra* and *Mimusops marginata* yield hard timber known locally as Milkwood, while *Sideroxylon inerme* is the White Milkwood used for building purposes, boatwork, &c.

Number of species about 320.

(EX. MILKWOOD. UMTONGWAAN.)

Calyx 5 lobed. Corolla 5 lobed. Stamens 5.
Staminodia 5.
Calyx 5-7 joined, Corolla 5-7 lobed. Stamens 5-7.
Staminodia 0.
Calyx 6-8 lobed, Corolla 18-24 lobed. Stamens
as many as inner corolla lobes. Staminodia
present.

SIDEROXYLON.

CHRYSOPHYLLUM.

MIMUSOPS.

LIST OF SPECIES.

1 <i>Chrysophyllum</i> , <i>Linn.</i>		discolor, <i>Sond.</i>	A.
natalense, <i>Sond.</i>	AB.	dispar, <i>N.E.B.</i>	C.
		marginata, <i>N.E.B.</i>	A-B.
		natalensis, <i>Schinz.</i>	
2 <i>Sideroxylon</i> , <i>Linn.</i>		obovata, <i>Sond.</i>	A.
inerme, <i>Linn.</i>	AB.	oleifolia, <i>N.E.B.</i>	
		Schinzii, <i>Engl.</i>	
3 <i>Mimusops</i> , <i>Linn.</i>		Woodii, "	B.
caffra. <i>E.M.</i>	A.		

ORDER CII. EBENACEÆ.

Another small Order, the members of which are almost confined to tropical and subtropical countries. All are trees or shrubs, and some yield hard and valuable wood. Ebony is the product of several species of *Diospyros*. The Calamander wood, which is much esteemed, is obtained from *Diospyros quesita*, a native of Ceylon. The Persimmon of the United States of America is *Diospyros virginiana*; but a much superior fruit which has more recently come into notice, and is not uncommon in cultivation, is the Japanese Persimmon, *Diospyros Kaki*, many varieties of which are in cultivation and are much esteemed. None of our native species are of any economic value, but the natives use the roots of one or more of them as purgatives.

Number of species about 250.

(EX. INDUNGAMUSI.)

Flowers perfect, 5-lobed. Stamens 10.
Flowers diœcious. Calyx and corolla 4-7 lobed or cleft.
Flowers diœcious. Calyx cup-like. Flowers solitary,
3-merous.

ROYENA.

EUCLEA.

MABA.

LIST OF SPECIES.

1 <i>Royena</i> , <i>Linn.</i>		Gurkei, <i>O. Kuntze.</i>	E-F.
cordata, <i>E.M.</i>	BC.	hirsuta, <i>Linn.</i>	D.
glandulosa, <i>Harv.</i>	?	lucida, <i>L.</i>	D.
Galpini, <i>Hiern.</i>	A.	nitens, <i>Harv.</i>	?

Royena, <i>Continued.</i>			
pallens, <i>Thb.</i>	AB.	lanceolata, <i>E.M.</i>	AB.
parviflora, <i>Hiern.</i>	Z.	macrophylla, <i>E.M.</i>	A.
scabrida, <i>Harv.</i>	?	multiflora, <i>Hiern.</i>	A.
villosa, <i>Linn.</i>	AB.	natalensis, <i>A.D. C.</i>	AB.
sp. (Woou 8825).	Z.	ovata, <i>Burch.</i>	A.
		undulata, <i>Thb.</i>	?
2 <i>Euclea</i> , <i>Linn.</i>		3 <i>Maba</i> , <i>Foster.</i>	
daphnoides, <i>Hiern.</i>	D.	natalensis, <i>Harv.</i>	AB.
Guerkei, <i>Hiern.</i>	B-C.		

ORDER CIV. OLEACEÆ.

An Order confined to hot and temperate climates, not found in cold or alpine regions. Several species of Jasmine are cultivated for ornament and a scented oil is obtained from their flowers. Olive oil is extracted from the fruits of *Olea europaea*, and its unripe fruits are eaten when preserved in brine, as also are those of some other species of *Olea*. The common Ash (*Fraxinus excelsior*) is well known, and from one or two species of the same genus "Manna" is obtained from incisions made in the bark. *Syringa vulgaris* is the common Lilac so well known in Europe. The wood of all our species of *Olea* is used and is in request. *Olea verrucosa* and *Olea laurifolia* are known as "Ironwood," and *Olea foveolata* as "Bastard Ironwood and Black Ironwood."

Number of species about 280.

(Ex. BLACK IRONWOOD. JASMIN).

Corolla valvate.	Ovules pendulous.	Corolla limb	
4 parted.			OLEA.
Corolla twisted, imbricate.	Ovules erect.		
1 Stamens included.	Fruit a twin berry.	Shrubs.	1
1 Stamens exserted.	Fruit a woody capsule.		JASMINIUM.
Shrubs.			
1 Stamens exserted.	Capsule didymous, circum-		SCHREBERA.
scissile.	scissile.		
			MENODORA.

LIST OF SPECIES.

1 <i>Jasminum</i> , <i>Linn.</i>		3 <i>Schrebera</i> , <i>Roxb.</i>	
angulare, <i>Vahl.</i>	E.	alata, <i>Welw.</i>	A.
glaucum, <i>Ait.</i>	A-B.	latialata, <i>Gilg.</i>	A.
multipartitum, <i>Hochst.</i>	AB.	obliquifolia, <i>Gilg.</i>	A.
streptopus, <i>E.M.</i>	AB.		
sp. (Wood 8860).	Z.	4 <i>Olea</i> , <i>Linn.</i>	
Gerrardi, <i>Harv.</i>	B.	capensis, <i>Linn.</i>	Z.
		foveolata, <i>E.M.</i>	A.B.
2 <i>Menodora</i> , <i>H. & B.</i>		laurifolia, <i>Lam.</i>	B.
africana, <i>Hk.</i>	D.	verrucosa, <i>Link.</i>	A.
		Woodiana, <i>Knebl.</i>	A.

ORDER CVI. APOCYNACEÆ.

A large family of plants found chiefly in warm countries, though many of them also inhabit temperate regions. Most, but not all of the species, possess a milky juice which is sometimes purgative, laxative, or febrifugal, and sometimes very poisonous. The seeds of *Cerbera Tanghin*, the "Ordeal tree" of Madagascar, though not much larger than an almond, are said each to contain sufficient poison to kill twenty men. Fortunately the plant rarely bears seed in the Durban Botanic Gardens. From several species india rubber is obtained, the kind which is largely exported from the East coast of Africa being chiefly obtained from different species of *Landolphia*. Of our indigenous species perhaps the best known and the most valuable is *Carissa grandiflora*, the "Amatungulu." *Carissa acuminata* also bears an eatable fruit, and is known as the small Amatungulu. *Acokanthzra venenata* is one of the plants from which the Bushmen in old days extracted the poison for tipping their arrows, and most likely *Acokanthera spectabilis* has the same poisonous properties. The bark of *Rauwolfia natalensis* is used medicinally by the natives. One or more species of *Strophanthus* were used by the natives of Central Africa as arrow poison, and the seeds of these species are now used medicinally in Europe. The properties of our native species are as yet unknown.

Number of species about 900.

(EX. AMATUNGULU; PERIWINKLE, ETC.)

Corolla lobes overlapping to the left, rarely to the right. Fruit baccate, drupaceous or dry.	1
Corolla lobes overlapping to the left, rarely to the right. Carpels 2, free or united at base.	2
Corolla lobes overlapping to the right, rarely to the left. Fruit follicular, seeds comose.	3
1 Shrubs with forked or thrice-forked spines.	CARISSA.
1 Unarmed shrubs, fruit a berry. Disk 0.	ACOKANTHERA.
1 " " " " cup-like.	RAUWOLFIA.
1 Small undershrub, fruit a follicle, seeds small.	LOCHNERA.
2 Sepals almost or quite free.	TABERNÆMONTANA.
2 Sepals united into a tubular or sub-campanulate tube, circumscissile or splitting.	VOACANGA.
3 Corolla lobes long-tailed with paired appendages between the lobes.	STROPHANTHUS.
3 Corolla lobes short, with 5 deltoid-accuminate scales in the throat.	ONCINOTIS.
3 Corolla lobes short with 5 oblong-bilobed scales in throat.	WRIGHTIA.

LIST OF SPECIES.

1 <i>Carissa</i> , <i>Linn.</i>		5 <i>Tabernæmontana</i> , <i>Linn.</i>	
acuminata, <i>A. D.C.</i>	A.	ventricosa, <i>Hochst.</i>	AB.
arduinia, <i>Linn.</i>	AB.	6 <i>Voacanga</i> , <i>Thouars.</i>	
grandiflorus, <i>A. D.C.</i>	A.	Dregei, <i>E.M.</i>	?
Wyliei, <i>N. E. Brown</i> ,	Z.	Thouarsii, <i>Roem. & Schultze.</i>	AB.
2 <i>Acokanthera</i> , <i>G. Don.</i>		7 <i>Strophanthus</i> , <i>D.C.</i>	
spectabilis, <i>Bth.</i>	A.	capensis, <i>D.C.</i>	C.
venenata, <i>Don.</i>	A.	natalensis, ?	C.
3 <i>Rauwolfia</i> , <i>Linn.</i>		8 <i>Oncinotis</i> , <i>Bth.</i>	
natalensis, <i>Sond.</i>	AB.	inandensis, <i>Wood & Evans.</i>	B.
4 <i>Lochnera</i> , <i>Reichb.</i>		9 <i>Wrightia</i> , <i>R. Br.</i>	
rosea, <i>Reichb.</i>	AB.	sp.	AB.

ORDER CVII. ASCLEPIADACEÆ.

A somewhat large family of plants well marked by the peculiar structure of their flowers. Like Apocynacæ they inhabit warm climates and are very abundant in South Africa. All possess a milky juice which has various properties, in some emetic, in others sudorific, purgative, poisonous, or quite harmless. The bark of some species contains a fine and strong fibre, while others yield india-rubber. Amongst our indigenous species the roots of *Chlorocodon Whitei* are used by the natives as a tonic, and the plant is known as u-Mondi. If it could be produced in quantity there would most likely be a demand for it at Home for preparing a beverage akin to Ginger Beer. The cottony substance attached to the seeds of some of the *Gomphocarpi* is used for stuffing pillows, &c., and is collected for this purpose in Cape Colony. The roots of some other species contain an alkaloid which was supposed to be equal in its effects to quinine; but analysis by competent chemists in England prove it to be quite inert, though previously unknown to science. The milky juice of *Sarcostemma viminale* will instantly allay the intense pain caused by the entrance into the eye of the juice of any Euphorbiaceous plant, though upon analysis at Home this also is said to be quite inert. The young seed-vessels and fleshy stems are cooked and eaten by the native women, and the stems of *Gomphocarpus physocarpus*, and perhaps of *G. fruticosus* also, contain a strong and perhaps valuable fibre.

Number of species about 1300.

KEY TO TRIBES.

Pollen glandular, affixed in fours to the dilated apices of the corpuscles.	A. PERIPLOCEÆ.
Pollinia waxy, 2 in each cell.	B. SECAMONEÆ.
Pollinia waxy, 1 in each cell.	
1 Corolla imbricate or valvate in bud.	1
1 Corolla always valvate in bud.	2
	3

2 Pollinia pendulous.
 2 Pollinia erect or horizontal.
 3 Stems usually leafy, rarely leafless.
 3 Stems leafless.

C. CYNANCHEÆ.
 D. MARSDENIEÆ.
 E. CEROPEGIEÆ.
 F. STAPELIEÆ.

KEY TO GENERA.

A. PERIPLOCEÆ.

Stems twining. 1
 Stems erect. 2
 1 Coronal scales linear or clavate. Flowers small.
 1 Coronal scales long, subulate, Flowers small.
 Calyx 5-glandular within.
 1 Coronal scales long, setaceo-acuminate, Flowers small.
 Calyx not glandular
 1 Coronal scales short, 3-lobed, central lobe acuminate. Flowers large
 2 Coronal scales clavate.
 2 Coronal scales lanceolate or subulate.

B. SECAMONEÆ.

Pollinia minute, coronal scales simple. SECAMONE,

C. CYNANCHEÆ.

Corolla imbricate in bud. 1
 Corolla valvate in bud. 2
 1 Stems erect. 3
 1 Stems climbing.
 2 Coronal scales flat, without appendage.
 2 Coronal scales flat or a little convex or concave,
 with a simple or 2-fid process on face of each.
 2 Coronal scales complicate, cucullate, laterally
 compressed, margins introrse.
 2 Coronal scales concave, cucullate at apex,
 with a ligule on face of each.
 3 Corona erect, with small transverse lamina on
 face of each scale.
 3 Corona spreading, with 2 collateral tongue-like
 processes on face of each
 4 Coronal scales each with a beak-like process
 on face of each.
 4 Corona annular or cup-shaped.
 5 Corona single, lobes with or without lanceolate
 or ligulate scale on face.
 5 Corona double, outer cup-shaped, inner 5-
 leaved. Leafless herbs.

1
 2
 3
 4
 XYSMALOBIUM.

SCHIZOGLOSSUM.

GOMPHOCARPUS.

ASCLEPIAS.

CORDYLOGYNE.

FANINNIA.

PENTARRHINUM.

CYNANCHUM.

SARCOSTEMMA.

GYMNEMA.

TENARIS.

Coronal scales none.
 Coronal scales 5.
 Coronal scales 10.

D. MARSDENIEÆ.

1
 2

CRYPTOLEPIS.

PENTOPETIA.

TACCAZEEA.

CHLOROCODON.

ECTADIOPSIS.

RAPHIONACME.

1
 2
 3
 4

5

Coronal scales 15.

1 Coronal scales fleshy, follicles not winged.

1 Coronal scales membranous, follicles not winged.

1 Coronal scales fleshy, reniform, follicles broadly 4-winged.

LASIOSTELMA.

TYLOPHORA.

PERGULARIA.

DREGEA.

E. CEROPEGIEÆ.

Erect herbs.

Climbers

1 Calyx not glandular. Coronal scales 5.

1 Calyx not glandular, Coronal scales 10.

1 Calyx glandular internally at base. Coronal scales 5.

1 Calyx glandular internally at base. Coronal scales 10.

2 Corona double, lobes opposite anthers shorter.

2 Corona double, lobes opposite anthers longer.

1
2SISYRANTHUS.
DICHÆLIA.

BRACHYSTELMA.

AULOSTEPHANUS.
RIOCREUXIA.
CEROPEGIA.

F. STAPELIEÆ.

Corolla lobes 2-4 times longer than broad.

CARALLUMA.

Corolla lobes not much longer than broad.

STAPELIA.

Corolla lobes with triangular teeth in the sinuses.

HUERNIA.

LIST OF SPECIES.

1 *Cryptolepis, R. Br.*capensis, *Schl.*cryptolepoides, *Schltr.*

AB.

E.

8 *Xysmalobium, R. Br.*

B.

confusum, *S. Ell.*

?

Gerrardi, *E.M.*

A-CZ.

involucratum, *Dcne.*

AZ.

padifolium, *S. Ell.*

D.

parviflorum, *Harv. MSS.*

C-E.

Stockenstromense, *S. Ell.*

D.

undulatum, *R. Br.*2 *Ectadiopsis, Bth.*oblongifolia, *Bth.*

AB.

3 *Pentopetia, Dcne?*natalensis, *Schltr.*

A.

4 *Raphionaceme, Harv.*macrorhiza, *Schltr.*

AB.

purpurea, *Harv.*

A-C.

scandens, *N.E.B.*

?

9 *Schizoglossum, E.M.*

E.

atropurpureum, *E.M.*

D.

biflorum, *Schltr.*

?

brachyandrum, *Schltr.*

D.

ciliatum, *Schltr.*

F.

elingue, *N.E.B.*

?

euphorbioides, *E.M.*

B-E.

fasciculare, *Schltr.*

A.

filifolium, *Schltr.*

D.

flavum, *Schltr.*

C-E.

glanduliferum, *Schltr.*

BZ.

natalensis, „

D.

nitidum, „

A.

oblongum, „

D.

pachyglossum, „

EZ.

pulchellum, „

?

5 *Taccazzea, Dcne.*Kirkii, *N.E.B.*

?

6 *Chlorocodon, Hk.*Whitei, *Hk. f.*

AB.

7 *Secamone, R. Br.*acutifolia, *Sond.*

?

frutescens, *Dcne.*

AB.

Gerrardi, *Harv.*

AB.

Thunbergii, *E.M.*

A.

Schizoglossum, <i>Continued.</i>		
stenoglossum, <i>Schltr.</i>	B-D.	
striatum, "	?	
tubulosum, "	D.	
verticillare, "	C.	
virens, <i>E.M.</i>	?	
viridiflorum, <i>Schltr.</i>	B.	
Woodii, <i>Schltr.</i>	D.	
10 Gomphocarpus, <i>R. Br.</i>		
albens, <i>E.M.</i>	A.B.	
appendiculatus, <i>Dcne.</i>	B-E.	
aureus, <i>Schltr.</i>	D.	
brevicuspis, <i>Dcne.</i>	B.	
campanulatus, <i>Harv.</i>	C.	
concinnus, <i>Schltr.</i>	Z.	
cucullatus, <i>Schltr.</i>	DB.	
cultriformis, <i>Harv.</i>	B.	
dealbatus, <i>Dcne.</i>	D.	
eminens, <i>Harv.</i>	C-E.	
fragrans, <i>Schl.</i>	A D.	
fruticosus, <i>R. Br.</i>	D.	
Gerrardi, <i>Harv.</i>	Z.	
gibbus, <i>Dcne.</i>	D.	
grandiflorus, <i>Dcne.</i>	C.	
lanatus, <i>E.M.</i>	D.	
linearis, <i>Dcne.</i>	E.	
macropus, <i>Schltr.</i>	C-E.	
marginatus, <i>Dcne.</i>	BC.	
McKenii, <i>Harv.</i>	Z.	
Meyerianus, <i>Schltr.</i>	D.	
multicaulis, <i>D. Diet.</i>	B-D.	
ochroleucus, <i>Schltr.</i>	B.	
peltigerus, <i>Dcne.</i>	AB.	
physocarpus, <i>E.M.</i>	AB.	
reflectens, <i>Dcne.</i>	B.	
revolutus, <i>Dcne.</i>	D.	
scaber, <i>Harv.</i>	B-D.	
truncatus, <i>Dcne.</i>	B.	
verticillatus, <i>E.M.</i>	D.	
Woodii, <i>Schltr.</i>	DE.	
11 Asclepias, <i>Linn.</i>		
schizoglossoides, <i>Schltr.</i>	C.	
12 Pentarrhinum, <i>E.M.</i>		
coriaceum, <i>Schltr.</i>	?	
insipidum, <i>E.M.</i>	AEZ.	
13 Cordylogyne, <i>E.M.</i>		
globosa, <i>E.M.</i>	E.	
sp. (<i>Periglossum angustifolium, Dcne.</i>),	D-F.	
sp. (<i>Periglossum Kassnerianum, Schltr.</i>)	?	
sp. (<i>Periglossum McKenii, Harv.</i>)	A.	
14 Fanninia, <i>Harv.</i>		
caloglossa, <i>Harv.</i>	D.	
15 Cynanchum, <i>Linn.</i>		
crassifolium, <i>L.</i>	A.	
natalitium, <i>Schltr.</i>	A.	
obtusifolium, <i>L. f.</i>	A.	
sp. (<i>Cynoctionum capense</i>),	A.	
sp. (<i>Gov. Herb. 5997</i>).	A.	
schizoglossum, <i>Schltr.</i>	A.	
16 Sarcostemma, <i>R. Br.</i>		
aphyllum, <i>R. Br.</i>	?	
viminale, <i>R. Br.</i>	AB.	
17 Gymnena, <i>R. Br.</i>		
sylvestre, <i>R. Br.</i>	AB.	
18 Tylophora, <i>R. Br.</i>		
Flanaganii, <i>Schltr.</i>	A.	
lycioides, <i>Dcne.</i>	A.	
syringæfolia, <i>E.M.</i>	A.	
19 Pergularia, <i>Linn.</i>		
africana, <i>N.E.B.</i>	A.	
20 Dregea, <i>E. Mey.</i>		
floribunda, <i>E.M.</i>	A.	
21 Tenaris, <i>E. Mey.</i>		
rubella, <i>E.M.</i>	B-D.	
22 Lasiostelma, <i>Bth.</i>		
Sandersonii, <i>Oliv.</i>	?	
23 Sisyranthus, <i>E.M.</i>		
anceps, <i>Schltr.</i>	?	
expansum, <i>Harv.</i>	?	
imberbis, <i>Harv.</i>	AB.	
macer, <i>Schltr.</i>	AB.	

Sisyranthus, *Continued.*
rotatus, *Schltr.*
trichostomum, *Schltr.*
virgatus, *H.M.*

24 *Ceropegia*, *Linn.*
ampliata, *E.M.*
antennifera, *Schltr.*
caffrorum, *Schltr.*
linearis, *E.M.*
Meyeri, *Dcne.*
pachystelma, *Schltr.*
Sandersoni, *Dcne.*
Woodii, *Schltr.*

25 *Riocreuxia*, *Dcne.*
Flanaganii, *Schltr.*
polyantha, *Schltr.*
torulosa, *Dcne.*

26 *Dichaelia*, *Harv.*
Gerrardi, *Harv.*

CD.	?	27 <i>Brachystelma</i> , <i>R. Br.</i>	
	Z.	<i>Gerrardi</i> , <i>Harv.</i>	B.
		<i>natalense</i> , <i>Schltr.</i>	AB.
		<i>pulchellum</i> , <i>Schltr.</i>	B.
D.		28 <i>Aulostephanus</i> , <i>Schltr.</i>	
D.		<i>natalensis</i> , <i>Schltr.</i>	B.
A.			
?			
DE.		29 <i>Garalluma</i> , <i>R. Br.</i>	
C.		<i>lutea</i> , <i>N.E.B.</i>	D.
AZ.			
B.			
		30 <i>Stapelia</i> , <i>Linn.</i>	
		<i>gigantea</i> , <i>N.E.B.</i>	Z.
		<i>Woodii</i> , <i>N.E.B.</i>	B.
A-E.		31 <i>Huernia</i> , <i>R. Br.</i>	
		<i>hystrix</i> , <i>N.E.B.</i>	BC.

ORDER CVIII. LOGANIACEÆ

The best known genus of this family is *Strychnos*, some of the members of which genus are very poisonous. From the seeds of *Strychnos Nux-vomica*, Strychnine is obtained, and the bark of the roots of some other of the genus is highly poisonous. That of *S. Tieute*, is used by the Javanese to poison their arrows, and in South America two other species are similarly used, and are supposed to be the most active ingredients in the "Curare." *S. Ignatius* yields the Ignatius bean of India, a supposed remedy for Cholera, and *S. potatorum* bears the "Clearing nut" of India, which clarifies the foul water placed in vessels whose inner surface has been rubbed with this bean. The pulp surrounding the seeds of our native tree *S. Gerrardi*, popularly known as "Gulugulu," is eaten by natives and children, and the bark of another species is used medicinally by the natives. The wood of another species *S. Atherstonei* has been used for staves of casks, but it is not of much value. That of *Nuxia floribunda* is used by wagon makers, and that of *Buddleia salviaefolia* is hard and strong, and is said to be suitable for wood engraving, and excellent for wood type; but the tree is not of large size.

Number of species about 350.

(Ex. KAFIR ORANGE, UMGULUGULU. SAGEWOOD.)

Corolla valvate. Berry with hard rind, pulpy within.

Leaves 3-5 veined.

STRYCHNOS.

1

Corolla imbricate. Fruit a 2-celled capsule.

1 Anthers exserted. Leaves linear. Flowers racemose. Undershrubs.

GOMPHOSTIGMA.

1 Anthers exserted. Leaves linear. cymose. Shrubs or trees.	Flowers	NUXIA.
1 Anthers exserted. Leaves tomentose. panicked. Shrubs or trees.	Flowers	CHILIANTHUS.
1 Anthers included. Leaves tomentose. cymose. Shrubs.	Flowers	BUDDLEIA.

LIST OF SPECIES.

1 <i>Gomphostigma</i> , <i>Turcz.</i>		4 <i>Buddleia</i> , <i>Linn.</i>	
<i>scopariooides</i> , <i>Turcz.</i>	D.	<i>auriculata</i> , <i>Bth.</i>	Z.
2 <i>Nuxia</i> , <i>Lam.</i>		<i>puschella</i> , <i>N. E. Brown.</i>	DE.
<i>congesta</i> , <i>R. Br.</i>	B.	<i>salviæfolia</i> , <i>Lam.</i>	A-F.
<i>floribunda</i> , <i>Bth.</i>	B.	<i>Woodii</i> , <i>Gilg.</i>	B.
<i>oppositifolia</i> , <i>Bth.</i>	A.		
sp. (<i>Wood</i> 1862).	B.	5 <i>Strychnos</i> , <i>Linn.</i>	
3 <i>Chilianthus</i> , <i>Burch.</i>		<i>Atherstonei</i> , <i>Harv.</i>	A.
<i>arboreus</i> , <i>Bth.</i>	A.	<i>Gerrardi</i> , <i>N. E. Brown.</i>	A.
<i>dyssophilus</i> , <i>Bth.</i>	AB.	<i>Henningsii</i> , <i>Gilg.</i>	A.
<i>oleaceus</i> , <i>Burch.</i>	A.	<i>spinosa</i> , <i>Lam.</i>	AB.

ORDER CIX. GENTIANÆ

Gentianæ are found in most countries, and contain a bitter principle which is used medicinally. *Gentiana lutea*, a European species, is said to be one of the earliest known medicines. *Erythraea centaurea*, the "Centaury," has been used as a substitute for it. The Water Trefoil, or Buckbean (*Menyanthes trifoliata*), has the same properties, and its intensely bitter root is said to be an excellent tonic. None of our species have been tested in this direction so far as known to us.

Number of species more than 500.

Floating herbs, with long petioled cordate leaves.	LIMNANTHEMUM.
Terrestrial herbs. Anthers exserted. Flowers red, purple, or white.	CHIRONIA.
Terrestrial herbs. Anthers included. Stigma globose. Flowers yellow.	SEBEA.
Terrestrial herbs. Anthers included. Stigma oblong. Flowers yellow.	BELMONTIA.

(LIST OF SPECIES.)

1 <i>Chironia</i> , <i>Linn.</i>		2 <i>Sebæa</i> , <i>R. Br.</i>	
<i>baccifera</i> , <i>L.</i>	A.	<i>acutiloba</i> , <i>Schinz.</i>	A.
<i>densiflora</i> , <i>S. Ell.</i>	BD.	<i>crassulæfolia</i> , <i>E. & Schl.</i>	A-E.
<i>palustris</i> , <i>Burch.</i>	BC.	<i>filiformis</i> , <i>Sch.</i>	B.
<i>peduncularis</i> , <i>Ldl.</i>	?	<i>Junodii</i> , <i>Schinz.</i>	D.
<i>purpurascens</i> , <i>Bth. & Hook.</i>	AB.	<i>linearifolia</i> , <i>Schinz.</i>	?
<i>pusilla</i> , <i>Oliv.</i>	A.	<i>Marlothi</i> , <i>Gilg.</i>	F.

Sebæa, <i>Continued.</i>	
natalensis, <i>Schinz.</i>	
pentandra, <i>E.M.</i>	F.
repens, <i>Schinz.</i>	D.
sedoides, <i>Gilg.</i>	F.
stricta, <i>Gilg.</i>	DE.
Thodeana, <i>Gilg.</i>	Z.
rhomboidea, <i>Schltr.</i>	?
Rudolfii, <i>Schinz.</i>	?
vitellina, „	EF.
Woodii, <i>Gilg.</i>	?

	3 <i>Belmontia, E.M.</i>	
	grandis, <i>E.M.</i>	AB.
	natalensis, <i>Schinz.</i>	B.
	Zeyheri, „	A.
	4 <i>Limnanthemum, Gmelin.</i>	
	Thunbergianum, <i>Griesb.</i>	AB.

ORDER CXII. BORAGINEÆ.

Many species of this Order have been used medicinally, but few, if any, are now so used, except, perhaps, in veterinary practice. *Symphytum perigrinum* is the "Prickly Comfrey," highly recommended as food for stock, but it did not find much favour in Natal. The "Borage" (*Borago officinalis*) is well known at home, and is used in the preparation of beverages. Some species of the Order are used as potherbs, and, lastly, several species of *Myosotis* are known as "Forget-me-not."

Number of species about 1200.

(Ex. UM-NOFUNOFU.)

Style terminal, ovary entire.	1
Style rising from base of lobes of ovary. Ovary 4-lobed.	2
1 Style twice forked at apex. Shrubs.	CORDIA.
1 Style 2-lobed at apex. Shrubs.	EHRETIA.
2 Nutlets not united to style or style base.	3
2 Nutlets united with style or style base. Imperforate at base	4
3 Corolla open. Stigma capitate. Nuts ovate.	LITHOSPERMUM.
3 Corolla closed with scales. Stigmas obtuse. Nuts compressed, smooth.	MYOSOTIS.
4 Nutlets 4, irregularly covered with hooked bristles. Nutlets depressed.	CYNOGLOSSUM.
4 Nutlets 4, margined with hooked bristles. Nutlets not depressed.	ECHINOSPERMUM.
4 Nutlets 1-3, one larger and winged.	TYSONIA.

LIST OF SPECIES.

1 <i>Cordia, Linn.</i>	3 <i>Cynoglossum, Sw.</i>	
caffra, <i>Sond.</i>	AB. enerve, <i>Turcz.</i>	B.
	micranthum, <i>Desf.</i>	B-D.
2 <i>Ehretia, Linn.</i>	4 <i>Echinospermum, Sw.</i>	
hottentottica, <i>Burch.</i>	B. capense, <i>D.C.</i>	CE.
	Lappula, <i>Lehm.</i>	?

5 <i>Myosotis</i> , <i>Linn.</i>		cinereum, <i>A.D.C.</i>	D.
afropalustris, <i>C. H. Wright.</i>	DE.	officinale, <i>Linn.</i>	E.
<i>sylvatica</i> , <i>Hoffm.</i>	EF.		
6 <i>Lithospermum</i> , <i>Linn.</i>		7 <i>Tysonia</i> , <i>Bolus.</i>	
<i>arvense</i> , <i>Linn.</i>	?	africana, <i>Bolus.</i>	EF.

ORDER CXIII. CONVOLVULACEÆ.

An Order whose members are widely distributed in tropical and subtropical countries, more rare in temperate climates, and quite absent from the colder ones. Very many of the species are cultivated for the beauty of their flowers, and some have powerful medicinal properties. Jalap is prepared from the rhizomes of *Convolvulus Jalapa* and *C. Schiedeanus*, but the best quality is said to be obtained from *Exogonium purga*. Scammony is obtained from *Convolvulus scammonia* and *C. sagittæfolius* of the Mediterranean regions, and *Ipomœa pandurata* of the U. S. America. *Convolvulus dissectus* is said to abound in prussic acid, and to be used in the preparation of "Noyau." Oil of Rhodium is the product of the rootstock of *Rhodorhiza* sp.

The "Sweet potato" is *Ipomœa batatas*, and is too well known to need further reference here. Many of our indigenous species bear handsome flowers, and are well worthy of cultivation. Perhaps the most striking among them is *I. Woodii*, first collected in a forest in Zululand.

I. purpurea has similar properties to Jalap, and is known to the natives as i-Jalapa

Number of species about 800.

Carpels united into a solid ovary.	1
Carpels 2-4, separate, or ovary deeply lobed.	2
1 Ovary 1-celled. Style 1.	HEWITTEA.
1 Ovary 2-4 celled. Style 1, stigmas didymus or 2 globose.	IPOMŒA.
1 Ovary 2-celled. Style 1, stigmas 2, linear or filiform.	CONVOLVULUS.
1 Ovary 2-celled. Style 1, stigmas 2, ovate or oblong, flattened.	JACQUEMONTIA.
1 Ovary 2-celled. Style 1, stigmas 2, linear-oblong, stem and leaves clothed with stellate hairs.	ASTEROCHLŒNA.
1 Ovary 2-celled. Style 1, stigmas 2, 2-fid. Ovary 2-ovuled Leaves sessile.	EVOLVULUS.
1 Ovary 2-celled. Style 1-2 fid or styles 2. Ovary 4-ovuled.	BREWERIA.
1 Parasitical leafless plants.	CUSCUTA.
2 Corolla 2-fid. Ovary 2-parted or lobed, lobes 2-ovuled.	DICHONDRA.
2 Corolla crenate. Ovary 4-parted or lobed. lobes 1-ovuled.	FALKIA.

LIST OF SPECIES.

1 *Ipomoea*, Linn.

albivenia, <i>D. Don.</i>	D.	hastatus, <i>Thb.</i>	Z.
angustifolia, <i>Jacq.</i>	AB.	natalensis, <i>Bernh.</i>	D.
argyreoides, <i>Choisy.</i>	E.	rhynchophyllum, <i>Baker.</i>	?
biloba, <i>Forsk.</i>	A.	sagittatus, <i>Thb.</i>	D.
cardiosepala, <i>Hochst.</i>	DE.	ulosepalus, <i>Hallier. f.</i>	E.
crassipes, <i>Hook.</i>	AD.		
digitata, <i>Linn.</i>	A.	3 <i>Hewitteaa</i> , <i>W. & A.</i>	
ficifolia, <i>Ldl.</i>	AB.	bicolor, <i>W. & A.</i>	AB.
geminiflora, <i>Rendle.</i>	A.		
Gerrardiana, „	?	4 <i>Jacquemontia</i> , <i>Chois.</i>	
Greenstockii, „	?	capitata, <i>G. Don. var.</i>	A.
Lambtoniana, „	D.		
oblongata, <i>E.M.</i>	D.	5 <i>Evolvulus</i> , <i>Linn.</i>	
obscura, <i>Ker.</i>	A.	alsinoides, <i>Linn.</i>	AC.
oenothera, <i>Hallier.</i>	D.		
ovata, <i>E.M.</i>	BC.	6 <i>Falkia</i> , <i>Linn.</i>	
palmata, <i>Forsk.</i>	AB.	oblonga, <i>Bernh.</i>	A.
purpurea, <i>Roth.</i>	A.		
quinquefolia, <i>Hochst.</i>	D.	7 <i>Dichrorhanda</i> , <i>Foster.</i>	
Saundersiana, <i>Baker</i>	?	repens, <i>Foster.</i>	B.
simplex, <i>Thb.</i>	AC.		
sublucens, <i>Rendle.</i>	?	8 <i>Cuscuta</i> , <i>Linn.</i>	
tetraptera, <i>Baker.</i>	AE.	appendiculata, <i>Engelm.</i>	?
Woodii, <i>N. E. Brown.</i>	Z.	cassythioides, <i>Nees.</i>	C.
Wightii, <i>Choisy.</i>	BZ.	Gerrardii, <i>Baker.</i>	Z.
		natalensis, „	BC.
2 <i>Convolvulus</i> , <i>Linn.</i>			
arvensis, <i>Linn.</i>	?	9 <i>Breweria</i> , <i>R. Br.</i>	
Bulleriana, <i>Rendle.</i>	DE.	capensis, <i>Baker.</i>	?
calycinus, <i>E. Mey.</i>	AB.		
capensis, <i>Burm.</i>	?	10 <i>Asterochlaena</i> , <i>Hallier. f.</i>	
farinosus, <i>Linn.</i>	AZ.	malvacea, <i>Hallier. f.</i>	A.

ORDER CXIV. SOLANACEÆ.

A large Order containing, according to the *Genera Plantarum*, 66 genera. Some of the species have, however, been unduly multiplied, the well-known *Solanum nigrum* having received more than 66 names from different authors. The best known members of the Order are the common potato, *Solanum tuberosum*, originally a native of Peru or Chili, but now unknown in a wild state, the Capsicum or Chilli *Capsicum annuum*, a native of India, the Tomato, *Lycopersicum esculentum* of Tropical America, and Tobacco *Nicotiana tabacum* of Central America. Less well-known species are the Egg plant or Brinjal. *Solanum melongena* and *S. oviferum* are different species of *Physalis* or Winter Cherry, of which our Cape Gooseberry (*Physalis peruviana*) is one, and is an introduced species. The Order includes

many poisonous plants, such as Belladonna (*Atropa belladonna*), Stramonium (*Datura stramonium*), (*D. tatula*), and (*D. metel*), Henbane (*Hyoscyamus niger*), and many others. In fact all of the species, unless well known to be harmless, should be used with caution. Of the species growing in a wild state in Natal, one, *S. capense*, has been used by the natives for curdling milk, and some have been used medicinally; but great care should be exercised in their use. *Withania somnifera* has been used in Natal medicinally by Europeans, it is said with some amount of success; but it is a doubtfully indigenous plant.

Number of species 1200 to 1300.

Fruit a many-seeded berry.	1
Fruit a many-seeded capsule.	5
1 Anthers opening by terminal pores.	SOLANUM.
1 Anthers splitting lengthwise.	2
2 Calyx inflated in fruit. Herbs or half shrubs.	3
2 Calyx unaltered in fruit. Shrubs.	4
3 Calyx 5-parted, segments sagittate. Ovary 3-4 celled. Flowers solitary.	NICANDRA.
3 Calyx deeply 5-fid, segments subulate. Ovary 2-celled. Flowers fascicled.	WITHANIA.
3 Calyx 5-toothed, 5-angled, closing in fruit. Ovary 2-celled. Flowers solitary.	PHYSALIS.
4 Corolla funnel-shaped or tubular.	LYCIUM.
5 Calyx deciduous in upper portion. Capsule 5-celled, thorny.	Datura.
5 Calyx persistent. Capsule small, not thorny.	NICOTIANA.

LIST OF SPECIES.

1 Solanum, Linn.

acanthoideum, <i>E. Mey.</i>	?
aculeatissimum, <i>Jacq.</i>	AE.
auriculatum, <i>Ait.</i>	A.
bifurcum, <i>Hochst.</i>	BZ.
capense, <i>L. f.</i>	BE.
didymanthum, var. pluriflorum, <i>Dunal.</i>	AB.
duplo-sinuatum, <i>Kt.</i>	A.
exasperatum, <i>E. Mey.</i>	?
ferrugineum, <i>Jacq.</i>	A.
geniculatum, <i>E. M.</i>	A.
incanum, <i>L.</i>	A.
indicum, <i>Linn.</i>	B.
nigrum, <i>L.</i>	AE.
panduræforme, <i>E. M.</i>	B.
sodomœoides, <i>O. Kuntze.</i>	D.
sodomœum, <i>Linn.</i>	D.
tomentosum, <i>L.</i>	?

2 Physalis, Linn.

minima, <i>Linn.</i>	A.
peruviana, <i>Linn.</i>	AC.
sp. (<i>Wood</i> 6359).	CD.
3 Withania, <i>Pauq.</i>	
somnifera, <i>Don.</i>	A.

4 Nicandra, Adans.

physaloides, <i>Gaertn.</i>	AC.
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5 Lycium, Linn.

acutifolium, <i>E. M.</i>	AB.
pendulinum, <i>Miers.</i>	BC.

6 Datura, Linn.

alba, <i>Nees.</i>	A.
stramonium, <i>Linn.</i>	AB.

7 Nicotiana, Linn.

glauca, <i>R. Graham.</i>	?
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ORDER CXV. SCROPHULARIACEÆ.

A large Order, whose members are chiefly found in temperate climates, more rare in tropical ones, and in cold and Alpine regions almost absent. Some of the species possess medicinal properties, the most useful of them being the "Foxglove," *Digitalis purpurea*, preparations of which are in frequent use. It is, nevertheless, a dangerous plant to use except under medical advice. The Brazilian shrub, *Brunfelsia uniflora*, is a plant often seen in cultivation. Its bark is poisonous, and has been called "vegetable mercury." A few others have been used medicinally, but none are of much importance. Our indigenous species vary in size from the minute *Ilysanthes nana*, which is scarcely 2 inches in height, to *Halleria lucida* and *Anastrabe integerrima*, which are small trees, and have been used for building purposes. Other genera contain handsome, flowering plants, and *Buttonia natalensis* is, perhaps, one of our most ornamental climbers; but hitherto, so far as we are aware, all efforts to cultivate it have been unsuccessful. It is most likely parasitical on some roots, as are the "Witchweeds," known to the natives as "Isona," which are found in mealie fields and are parasitical on the roots of the mealies and other species of the grass family. They are different species of the genus *Striga*. Some, if not all of the species of *Harveya* and *Cynium*, have also the reputation of being parasitical.

Number of species about 2000.

KEY TO THE TRIBES.

Leaves all alternate.	1
Leaves all opposite (in the Natal species).	2
Leaves (at least the lower) opposite.	3
Leaves opposite or alternate.	4
1 Corolla tube widened into a long throat, two back lobes outermost in bud. Capsule septicidally 2-valved.	APOTOSIMEÆ.
2 Corolla lobes flat, back one interior in bud. Under shrubs. not parasitic.	DIGITALEÆ.
3 Corolla resupinate, bifoveolate, bicalcarate or bisacculate at base, back lobes outermost in bud. Capsule septicidal.	HEMIMERIDEÆ.
3 Corolla without pocket or spur, two back lobes outermost in bud. Fruit capsular and septicidal, or fleshy and indehiscent.	CHELONEÆ.
3 Corolla without pocket or spur, back lobes outermost in bud, anthers cells confluent. Capsule septicidal.	NEMIEÆ.
3 Corolla without pocket or spur, back lobes outermost in bud. Anther cells distinct or confluent at apex. Fruit capsular, loculicidal, septicidal, or subinindehiscent.	GRATIOLEÆ.

4 Corolla saccate, foveolate or spurred at base, two back lobes outermost in bud. Capsule loculicidal, or dehiscing by pores or slits from or near the apex.

4 Corolla lobes flat, not saccate, not spurred, one or both back lobes interior in bud. Herbs mostly parasitical or half parasitical.

ANTIRRHINIDÆ.

GERRARDIÆ.

KEY TO GENERA.

APTOSIMEÆ.

Low shrubs. Stamens 4, all the anthers perfect. Capsule ovoid-conical, acute, compressed at apex. The only Natal genus.

PELIOSTOMUM.

DIGITALEÆ.

Leaves opposite. Corolla tube very short, 4-lobed, lobes patent. Stamens 2. Capsule loculicidal. The only Natal genus.

VERÓNICA.

HEMIMERIDEÆ.

Corolla not resupinate (in Natal species). Stamens 4, front pair sometimes sterile. The only Natal genus.

DIASCIA.

CHELONEÆ.

Leaves decussate, fleshy. Flowers red. Fruit fleshy, indehiscent.

DERMATOBOTRYS.

Leaves usually ternately verticillate, sub-coriaceous. Flowers white or tinged with pink. Fruit capsular, septicidal.

BOWKERIA.

Leaves opposite, not decussate. Fruit baccate, indehiscent.

1

Leaves opposite, not decussate. Fruit capsular, septicidal.

2

1 Calyx 3-5 cleft. Corolla tube much longer than calyx. Tree.

HALLERIA.

1 Calyx 5-partite. Corolla not much longer than calyx. Undershrub.

TEEDIA.

2 Flowers large, orange to dull purple. Undershrub.

PHYGELIUS.

2 Flowers smaller, yellow with reddish faint markings. Tree.

ANASTRABE.

NEMIEÆ.

Bracts free from calyx and pedicel. Bracts adnate to calyx or pedicel.

1

2

1 Flowers usually (not always) cymose rather than simply racemose. Style filiform, apex sub-clavate.

1 Flowers usually axillary or simply racemose, sometimes cymose. Style filiform, shortly 2-lobed at apex.

2 Calyx equally 5-cleft or 5-partite.

2 Calyx bipartite or bilabiate.

MANULEA.

SUTERA.

PHYLLOPODIUM.

ZALUZIANSKYA.

GRATIOLEÆ.

Filaments all on corolla tube about or below its middle. Capsule loculicidal.

MIMULUS.

Filaments all on corolla tube about or below its middle. Fruit subin dehiscent.

LIMOSILLA.

Filaments inserted on upper part of corolla tube. Capsule septicidal.

ILYSANTHES.

ANTIRRHINEÆ.

Corolla with only one pit, pocket, or spur, at the base; back lip undivided or epaarginate; front lip 4-lobed. Capsule compressed. Septicidal.

NEMESIA.

Capsule with only one spur at the base, back lip bilobed, front lip trilobed. Capsule sub-globose, or subquadrate, not much compressed, loculicidal.

DICLIS.

GERRARDIEÆ.

Stamens 4, anthers 2-celled, both cells fertile.

MELASMA.

1

Stamens 4, anthers 2-celled, one cell barren.

Stamens 4, anthers 1-celled.

HARVEYA.

2

1 Leaves mostly scale-like.

1 Stamens approximating in pairs. Leaves pinnatisect. Climber.

BUTTONIA.

1 Stamens 2 or all approximating in pairs. Leaves narrow or cut into narrow segments.

SOPUBIA.

1 Stamens included. Anthers free. Erect or prostrate

BOPUSIA.

2 Capsule straight, limb of corolla short, 5-fid.

BUCHNERA.

2 Capsule straight, limb of corolla short, 2-labiate, tube abruptly bent above the middle.

STRIGA.

2 Capsule straight, limb of corolla large, tube gently curved.

CYONIUM.

2 Capsule ovate, obliquely rostrate,

RHAMPICARPA.

LIST OF SPECIES.

1 <i>Peliostomum</i> , <i>Bth</i>		11 <i>Manulea</i> , <i>Linn.</i>
<i>calycinum</i> ; <i>N. E. Brown.</i>	A.	<i>crassifolia</i> , <i>Bth.</i> CF.
2 <i>Diascia</i> , <i>Link & Ott.</i>		<i>parviflora</i> , <i>Bth.</i> AE.
<i>capsularis</i> , <i>Bth.</i>	?	<i>thrysiflora</i> , <i>L.</i> A.
<i>cordata</i> , <i>N. E. Brown.</i>	DF.	
<i>expolita</i> , <i>Hiern.</i>	B.	
<i>purpurea</i> , <i>N. E. Brown</i>	EF.	
<i>racemulosa</i> , <i>Bth.</i>	AB.	
<i>rigescens</i> , <i>E.M.</i>	CD.	
<i>rotundifolia</i> , <i>Hiern.</i>	BC.	
3 <i>Nemesia</i> , <i>Vent.</i>		12 <i>Sutera</i> , <i>Roth.</i>
<i>albiflora</i> , <i>N. E. Brown.</i>	DF.	<i>arcuata</i> , <i>Hiern.</i> F.
<i>cynanchifolia</i> , <i>Bth.</i>	AC.	<i>atropurpurea</i> , <i>Hiern.</i> D.
<i>Flanaganii</i> , <i>Hiern.</i>	E.	<i>aurantiaca</i> , <i>Hiern.</i> E.F.Z.
<i>foetens</i> , <i>Vent.</i>	AF.	<i>brachiata</i> , <i>Hiern.</i> ?
<i>floribunda</i> , <i>Lehm.</i>	AF.	<i>bracteolata</i> , <i>Hiern.</i> ?
<i>melissæfolia</i> , <i>Bth.</i>	BF.	<i>breviflora</i> , <i>Hiern.</i> CF.
4 <i>Dielis</i> , <i>Bth.</i>		<i>brunnea</i> , <i>Hiern.</i> D.
<i>petiolaris</i> , <i>Bth.</i>	?	<i>Burkeana</i> , <i>Hiern.</i> Z.
<i>reptans</i> , <i>Bth.</i>	AF.	<i>coerulea</i> , <i>Hiern.</i> F.
5 <i>Dermatobotrys</i> , <i>Bolus.</i>	Z.	<i>compta</i> , <i>Hiern.</i> E.
<i>Saundersii</i> , <i>Bolus.</i>		<i>crassicaulis</i> , <i>Hiern.</i> EF.
6 <i>Halleria</i> , <i>Linn.</i>		<i>floribunda</i> , <i>Hiern.</i> AE.
<i>lucida</i> , <i>Linn.</i>	A.E.	<i>grandiflora</i> , <i>Hiern.</i> ?
7 <i>Teedia</i> , <i>Burch.</i>		<i>humifusa</i> , <i>Hiern.</i> BC.
<i>lucida</i> , <i>Rudolphi.</i>	BC.	<i>Kraussiana</i> , <i>Hiern.</i> AC.
8 <i>Phygelius</i> , <i>E.M.</i>		<i>luteiflora</i> , <i>Hiern.</i> DE.
<i>aequalis</i> , <i>Harv.</i>	BF.	<i>montana</i> , <i>S. Moore</i> , EF.
9 <i>Anastrabe</i> , <i>E.M.</i>		<i>natalensis</i> , <i>D. Kuntze</i> , A.
<i>integerrima</i> , <i>E.M.</i>	A.B.	<i>neglecta</i> (<i>Wood & Evans</i>), EF.
10 <i>Bowkeria</i> <i>Harv.</i>		<i>Hiern.</i>
<i>Gerrardiana</i> , <i>Harv.</i>	BD.	<i>noodsbergensis</i> , <i>Hiern.</i> C.
<i>natalensis</i> , <i>Schinz.</i>	EF.	<i>palustris</i> , <i>Hiern.</i> ?
<i>simpliciflora</i> , <i>MacOwan.</i>	BF.	<i>pallidescens</i> , <i>Hiern.</i> CD.
<i>triphylla</i> , <i>Harv.</i>	F.	<i>pinnatifida</i> , <i>O. Kuntze</i> , B.
<i>velutina</i> , <i>Harv.</i>	?	<i>platysepala</i> , <i>Hiern.</i> BZ.
		<i>polensis</i> , <i>Hiern.</i> F.
		13 <i>Phyllopodium</i> , <i>Bth.</i>
		<i>bracteatum</i> , <i>Bth.</i> A.
		14 <i>Zaluzianskya</i> , <i>F. W. Schmidt</i> .
		<i>capensis</i> , <i>Walp.</i> DE.
		<i>distans</i> , <i>Hiern.</i> EF.
		<i>goseloides</i> , <i>Diels.</i> EF.
		<i>maritima</i> , <i>Walp.</i> AE.
		<i>microsiphon</i> , <i>K. Schum.</i> F.
		<i>ovata</i> , <i>Walp.</i> E.
		15 <i>Mimulus</i> , <i>Linn.</i>
		<i>gracilis</i> , <i>R. Br.</i> AF.

16 <i>Limosella</i> , <i>Linn.</i>		21 <i>Buttonia</i> , <i>McKen.</i>	
<i>aquatica</i> , <i>Linn.</i>	AF.	<i>natalensis</i> , <i>McKen.</i>	AB.
<i>grandiflora</i> , <i>Bth.</i>	BC.		
<i>longiflora</i> , <i>O. Kuntze</i> .	F.	22 <i>Sopubia</i> , <i>Hamilt.</i>	
<i>maior</i> , <i>Diels.</i>	BF.	<i>cana</i> , <i>Harv.</i>	AE.
		<i>simplex</i> , <i>Hochst.</i>	AB.
		<i>trifida</i> , <i>Hamilt.</i>	D.
17 <i>Ilysanthes</i> , <i>Rafin.</i>	F.		
<i>conferta</i> , <i>Hiern.</i>	?	23 <i>Bopusia</i> , <i>Presl.</i>	
<i>longiflora</i> , <i>O. Kuntze</i> .	BF.	<i>scabra</i> , <i>Presl.</i>	AE.
<i>nana</i> , <i>Engl.</i>	AC.		
<i>riparia</i> , <i>Rafin.</i>		24 <i>Buchnera</i> , <i>Linn.</i>	
18 <i>Veronica</i> , <i>Tourn.</i>	D.	<i>dura</i> , <i>Bth.</i>	AB.
<i>anagallis</i> , <i>Linn.</i>		<i>glabrata</i> , <i>Bth.</i>	AE.
19 <i>Melasma</i> , <i>Berg.</i>			
<i>capense</i> , <i>Hiern.</i>	CF.	25 <i>Oycium</i> , <i>E.M.</i>	
<i>indicum</i> , <i>Wettst.</i>	D.	<i>adonense</i> , <i>E.M.</i>	AE.
<i>natalense</i> , <i>Hiern.</i>	D.	<i>Huttoniae</i> , <i>Hiern.</i>	CD.
<i>orobanchoides</i> , <i>Engl.</i>	AD.	<i>racemosum</i> , <i>Bth.</i>	BF.
<i>scabrum</i> , <i>Berg.</i>	AF.		
<i>sessiliflorum</i> , <i>Hiern.</i>	AC.	26 <i>Rhamphicarpa</i> , <i>Bth.</i>	
		<i>fistulosa</i> , <i>Bth.</i>	E.
20 <i>Striga</i> , <i>Lour.</i>		<i>tubulosa</i> , <i>Bth.</i>	AE.
<i>elegans</i> , <i>Bth.</i>	AE.		
<i>Forbesii</i> , <i>Bth.</i>	BE.	27 <i>Harveya</i> , <i>Hook.</i>	
<i>Junodii</i> , <i>Schinz.</i>	EF.	<i>Bolusii</i> , <i>O. Kuntze</i> .	?
<i>lutea</i> , <i>Lour.</i>	AE.	<i>coccinea</i> , <i>Schltr.</i>	AF.
<i>orobanchoides</i> , <i>Bth.</i>	AE.	<i>purpurea</i> , <i>Harv.</i>	CD.
<i>Thunbergii</i> , <i>Bth.</i>	AE.	<i>speciosa</i> , <i>Bernh.</i>	AE.
		<i>squamosa</i> , <i>Steud.</i>	A.

ORDER CXVII. LENTIBULARINEÆ.

A small Order including 4 genera, two only of which are represented in Natal. The genus *Utricularia*, which is by far the largest genus of the four, takes its name from the bladder-like organs usually found on the submerged leaves of the completely aquatic species. Of these organs De Candolle says: "These bladders are rounded and furnished with a kind of movable operculum. In the young plant they are filled with a mucus heavier than water, and the plant, submerged by this ballast, remains at the bottom. Towards the flowering season the leaves secrete a gas which enters the utricles, raises the operculum and drives out the mucus, when the plant, now furnished with aerial bladders, rises slowly and floats on the surface, and then flowers. This accomplished, the leaves again secrete mucus, which replaces the air in the utricles, and the plant redescends to the bottom and ripens its seeds in the place where they are to be grown." (De Candolle. Vegetable physiology). Some, however, of our indigenous species are found on moist rocks and similar places, where there is

seldom, if ever, sufficient water to float them, and they are often found on perpendicular rocks, down which the water trickles.

Some of the European species have been employed medicinally, but their use is now almost, if not quite, discontinued.

Number of species about 180.

Calyx of 2 sepals. Utricles bladder-like, ovoid or globose.

UTRICULARIA.

Calyx deeply 5-partite. Utricles tubular with 2 spirally twisted arms.

GENLISEA.

LIST OF SPECIES.

1 <i>Utricularia</i> , <i>Linn.</i>			AB.
<i>exoleta</i> , <i>R. Br.</i>	AF.	<i>stellaris</i> , <i>Linn.</i>	
<i>foliosa</i> , <i>Linn.</i>	?	<i>tribracteata</i> , <i>Hochst.</i>	A.
<i>livida</i> , <i>E.M.</i>	AD.		
<i>prehensilis</i> , <i>E.M.</i>		2 <i>Genlisea</i> , <i>A. St. Hil.</i>	
<i>Sandersonii</i> , <i>Oliv.</i>	AB.	<i>hispidula</i> , <i>Stapf.</i>	?

ORDER CXIX. GESNERACEÆ.

Another small Order, one genus only of which is represented in our flora. Plants of the family have little, if any, economic value; but many are highly ornamental, and are largely cultivated for their beauty. From *Streptocarpus Wendlandii* of Natal, and *S. Dunnii* of Transvaal, hybrids of great excellence have been produced, and are now in cultivation in Europe. Other species have also been utilised for the same purpose.

Number of species about 700.

Stemless herbs, with scape-like peduncles.

STREPTOCARPUS.

LIST OF SPECIES.

1 <i>Streptocarpus</i> , <i>Ldl.</i>			AC.
<i>angustilobus</i> , <i>N.E.B.</i>	F.	<i>polyanthus</i> , <i>Hook.</i>	
<i>Cooperi</i> , <i>C. B. Clarke.</i>	EF.	<i>prolixa</i> , <i>C. B. Clarke.</i>	B.
<i>Daviesii</i> , <i>N. E. Brown.</i>	Z.	<i>pusilla</i> , <i>Harv.</i>	F.
<i>Fanniniæ</i> , <i>Harv.</i>	CD.	<i>Rexii</i> , <i>Ldl.</i>	B.D.Z.
<i>grandis</i> .	Z.	<i>Saundersii</i> , <i>Hook.</i>	B.
<i>Haygarthii</i> , <i>N.E.B.</i>	Z.	<i>tubiflos</i> , <i>C. B. Clarke.</i>	BZ.
<i>pentherianus</i> , <i>Fritsch.</i>	D.	<i>Wendlandii</i> , <i>Sprenger.</i>	Z.
<i>lutea</i> , <i>C. B. Clarke.</i>	?	<i>Woodii</i> , <i>C. B. Clarke.</i>	B.D.

ORDER CXX. BIGNONIACEÆ.

An Order confined to tropical and subtropical countries, and quite absent from Europe. Many of the species are cultivated for ornament; and in their native countries some have been used medicinally. *Jacaranda mimosaeifolia*, in addition to being a very orna-

mental flowering tree, is said to yield a handsome and valuable wood. The wood of some of the climbing species represents in section a sort of Maltese cross, resulting from the unequal development of the layers of liber. The well-known *Bignonia capreolata* has this peculiarity. Two genera only are represented in Natal, each by a single species, and neither of them have any economic value.

Number of species about 450.

Ovary 2-celled. Fruit loculicidal. Seeds winged. A rambling shrub.

TECOMARIA.

Ovary 1-celled. Fruit indehiscent. Seeds not winged. A tree.

KIGELIA.

LIST OF SPECIES.

1 *Tecomaria, Spach.*
capensis, Spach.

2 *Kigelia, DC.*
AB. *pinnata, DC.* CD.

ORDER CXXI. PEDALINEÆ.

A small tropical Order, one species only of which is really indigenous in Natal. *Sesamum*, which is included here and also in the Flora *capensis*, is really, I think, an introduced plant, and is cultivated by the natives. Two species only of the family are of much economic value. They are *Sesamum indicum* and *S. orientale*. Their seeds yield a valuable oil, chiefly used in the manufacture of soap. These plants are largely cultivated in India and on the East coast of Africa. Several species of *Martynia* bear curious hooked seed vessels, and are not uncommon in cultivation. *Uncaria procumbens*, the "Grapple" plant of South Africa, formerly included in this Order, has now been removed to the Order Rubiaceæ. Our only species of the Order is a somewhat showy weed when in flower, and has lately been introduced into cultivation at home.

Number of species about 40.

Capsule acute or acuminate at apex.
Capsule 3-horned at apex.

SESAMUM.
CERATOTHECA.

LIST OF SPECIES.

1 *Sesamum, Linn.*
indicum, D.C.

2 *Ceratotheca, Endl.*
A. *triloba, E.M.*

AB.

ORDER CXXII. ACANTHACEÆ.

A large and well-known family, which is represented all over the world, except in the coldest climates. None of the species are used medicinally in Europe, though in the countries where they are indigenous they are sometimes employed as tonics, febrifuges, etc. In India one species has some reputation as a remedy for rheumatism, and another yields the blue "Room" dye. A French tonic, "Drogue amere," is the tincture of *Justicia paniculata* with other ingredients added. *Acanthus mollis* is the plant whose leaves have been copied

as ornaments for the Corinthian pillars. The roots of *Rhinacanthus communis*, boiled in milk, have been used for the cure of ringworm, and also for snake bites.

The Order includes from 1300 to 1400 species.

KEY TO TRIBES.

Corolla lobes twisted in bud. Calyx minute, annular. A. THUNBERGIEÆ

Corolla lobes twisted in bud. Style 2-fid, one of the lobes often tooth-like or obsolete. Calyx or bracteoles often conspicuous. B. RUELLIEÆ.

Corolla imbricate in bud, unilabiate. C. ACANTHEÆ.

Corolla imbricate in bud, 2-labiate or sub-equal. D. JUSTICIEÆ.

Style equally 2-fid or sub-entire.

KEY TO GENERA.

A. THUNBERGIEÆ.

Calyx small, hidden by two leafy bracts. THUNBERGIA.

B. RUELLIEÆ.

Ovules 3 or more in each cell of the ovary. 1

Ovules 2 in each cell of the ovary. 2

1 Capsules with seeds in upper part, cylindric and solid at base.

2 Placenta not rising elastically from base of the capsule.

2 Placenta rising elastically from base of capsule.

3 Stamens 4, perfect.

3 Stamens 2, with or without rudiments of others.

4 Floral leaf containing 3-1 ebracteate flowers.

C. ACANTHEÆ.

Calyx 4-parted, segments unequal. Undershrubs, often spiny.

Calyx 5-parted, segments sub-equal. Shrubs without spines.

Calyx 5-parted, segments unequal. Undershrubs, not spiny.

BLEPHARIS.

SCLEROCHITON.

CROSSANDRA.

D. JUSTICIEÆ.

Corolla funnel or salver shaped, imbricate. 1

Corolla 2-labiate.

1 Calyx segments 4, the two lateral ones narrower.

1 Calyx segments 5, sub-equal.

3 Flowers in dense involucrated heads.

3 Flowers spicate or paniculate or racemose.

Stamens 4.

3 Flowers in terminal racemes. Stamens 2, fertile.

2 Stamens 2, anthers 1-celled.

2 Stamens 2, anthers 2-celled.

BARLERIA.

CRABBEA.

ASYSTASIA.

MACKAYA.

4

5

4 Staminodes 2.	RUTIYA.
4 Staminodes none.	HYPОESTES.
5 Lower anther cell spurred. Seeds usually 4, rough or tubercled.	JUSTICIA.
5 Lower anther cell spurred. Seeds 2, smooth, usually shining.	MONECHMA.
5 Lower anther cell not spurred.	6
6 Bracts longer than calyx.	7
6 Bracts shorter than calyx.	8
7 Capsule short, the septum in ripe fruit breaking off from valves.	DICLIPTERA.
7 Capsule long, septum persistent. Herbaceous.	PERISTROPHE.
7 Capsule long, septum persistent. Shrubs.	ADHATODA.
8 Corolla tube short, back lobe erect, front lobe convex, rugose.	ISOGLOSSA.
8 Corolla tube long, back lobe linear, recurved.	RHINACANTHUS.

LIST OF SPECIES.

1 <i>Thunbergia</i> , Linn.	6 <i>Blepharis</i> , Juss.
alata, Bojer.	angusta, <i>T. And.</i> ?
aspera, Nees.	boerhaavifolia, <i>Pers.</i> B.
atriplicifolia, E.M.	dilatata, <i>C. B. Clarke.</i> D.
Dregeana, Nees.	longispica, <i>C. B. Clarke.</i> CD.
hirtistyla, <i>C. B. Clarke.</i>	molluginifolia, <i>Pers.</i> B-E.
natalensis, Hook.	pruinosa, <i>Engl.</i> A.
pondensis, <i>Lindau.</i>	setosa, <i>Nees.</i> ?
purpurata, Harv.	
sericea, "	
venosa, <i>C. B. Clarke.</i>	
2 <i>Ruellia</i> , Linn.	7 <i>Sclerochiton</i> , Harv.
Baurii, <i>C. B. Clarke.</i>	Harveyanus, <i>Nees.</i> A-B Z.
malacophylla, <i>C. B. Clarke.</i>	8 <i>Crossandra</i> , Salisb.
ovata, <i>Thb.</i>	Greenstockii, <i>S. Moore.</i> D.
patula, <i>Jacq.</i>	9 <i>Barleria</i> , Linn.
Woodii, <i>C. B. Clarke.</i>	barbata, <i>E.M.</i> AB.
Zeyheri, <i>T. And.</i>	cinereicaulis, <i>N. E. Brown.</i> CD.
3 <i>Dyschoriste</i> , Nees.	elegans, <i>S. Moore.</i> A.
depressa, Nees.	Gueinzii, <i>Sond.</i> ?
4 <i>Chætacanthus</i> , Nees.	macrostegia, <i>Nees.</i> D.
Burchellii, Nees.	Meyeriana, <i>Nees.</i> AB.
glandulosus, Nees.	mucronata, <i>Lindau.</i> C.
Persoonii, Nees.	obtusa, <i>Nees.</i> D.
5 <i>Phayopsis</i> , Willd.	ovata, <i>E.M.</i> C.
longifolia, <i>Sims.</i>	Woodii, <i>C. B. Clarke.</i> B.
parviflora, Willd.	
6 <i>Crabbea</i> , Harv.	10 <i>Crabbea</i> , Harv.
hirsuta, <i>Harv.</i>	hirsuta, <i>Harv.</i> AB.
nana, <i>Nees.</i>	nana, <i>Nees.</i> C-E.
pedunculata, <i>N. E. Brown.</i>	pedunculata, <i>N. E. Brown.</i> AB.

11 <i>Mackaya, Harv.</i>		17 <i>Rhinacanthus, Nees.</i>	
<i>bella, Harv.</i>	AB.	<i>communis, Nees.</i>	AB.
12 <i>Asystasia, Blume.</i>	A-C.	18 <i>Dicliptera, Juss.</i>	C.
<i>coromandeliana, Nees.</i>	?	<i>clinopodia, Nees.</i>	A.
<i>natalensis, C. B. Clarke.</i>	A.	<i>heterostegia, Nees.</i>	E.
<i>Schimperi, T. And.</i>	Z.	<i>Quintasii, Lindau.</i>	
<i>varia, N. E. Brown.</i>			
13 <i>Ruttya, Harv.</i>	AB.	19 <i>Peristrophe, Nees.</i>	A.
<i>ovata, Harv.</i>		<i>Hensii, C. B. Clarke.</i>	?
14 <i>Justicia, Linn.</i>		<i>natalensis, T. And.</i>	
<i>betonicoides, C. B. Clarke.</i>	AB.	20 <i>Hypoestes, R. Br.</i>	AB.
<i>campylostemon, T. And.</i>	A-C.	<i>antennifera, S. Moore.</i>	A-F.
<i>cheiranthifolia, C. B. Clarke.</i>	?	<i>aristata, R. Br.</i>	C.
<i>debilis, Lam.</i>	B.	<i>phaylopsoides, S. Moore.</i>	EF.
<i>flava, Vahl.</i>	A.	<i>triflora, R. & Sch.</i>	
<i>Kraussii, C. B. Clarke.</i>	AB.	<i>verticillaris, R. Br.</i>	
<i>petiolaris, E.M.</i>	A-B.		
<i>pulegioides, E.M.</i>	AB.		
<i>rotundifolia, E.M.</i>	A.		
<i>Woodii, C. B. Clarke.</i>	C.		
15 <i>Monechma, Hochst.</i>	D.	21 <i>Isoglossa, Oerst.</i>	A.
<i>Atherstonei, C. B. Clarke.</i>		<i>ciliata, Lindau.</i>	?
<i>bracteatum, Hochst.</i>	A.	<i>Cooperi, C. B. Clarke</i>	E.
<i>fimbriatum, C. B. Clarke.</i>	?	<i>delicatula,</i> "	C.
		<i>Eckloniana, Lindau.</i>	A.
		<i>Grantii, C. B. Clarke.</i>	A.
		<i>hypoestiflora, Lindau</i>	A.
		<i>Macowanii, C. B. Clarke.</i>	C.
		<i>ovata, Lindl.</i>	A.
		<i>stipitata, C. B. Clarke.</i>	A.
		<i>Woodii, "</i>	AB.
16 <i>Adhatoda, Nees.</i>			
<i>Andromeda, C. B. Clarke.</i>			
<i>Duvernoia, "</i>			
<i>natalensis, Nees.</i>			

ORDER CXXIV. SELAGINEÆ.

A small family containing 10 genera only, of which six or seven are almost confined to Central and South Africa—one Asian and one from the Mediterranean region and the Canary Islands. In Natal we have three genera only. *Hebenstreitia* is wholly South African. *Walafrida* has an outlying species in Madagascar. Some of the species are ornamental and in cultivation, but none are of any economic value. The flowers of *Hebenstreitia dentata* are said to have no scent in the morning, a strong and disagreeable one at noon, and a pleasant one in the evening.

Number of species about 240.

Calyx and corolla cleft in front. Carpels 2, very unequal.

Calyx 5-cleft. Corolla limb 5-fid. Carpels subequal.

Calyx 3-cleft or parted. Corolla 5-lobed.

HEBENSTREITIA.

SELAGO.

WALAFRIDA.

LIST OF SPECIES.

1 *Hebenstreitia*, *Linn.*

comosa, <i>Hochst.</i>	AB.	corymbosa, <i>Linn.</i>	?
dentata, <i>Linn.</i>	BC.	hyssopifolia, <i>E.M.</i>	A-D.
elongata, <i>Bolus.</i>	DE.	lithospermoides, <i>Rolfe.</i>	?
fruticosa, <i>Sims.</i>	C.	longiflora, „	C.
integrifolia, <i>Linn.</i>	A.	longipedicellata, „	Z.
polystachya, <i>Harv.</i>	BC.	monticola, <i>Wood & Evans.</i>	F.
		natalensis, <i>Rolfe.</i>	B.
		pachypoda, <i>Rolfe.</i>	EF.
2 <i>Walafrida</i> , <i>E.M.</i>	BE.	peduncularis, <i>E.M.</i>	A.
densiflora, <i>Rolfe.</i>	?	Sandersoni, <i>Rolfe.</i>	F.
Nachtigali, <i>Rolfe.</i>		Saundersiae, „	?
		Schlechteri, „	E.
3 <i>Selago</i> , <i>Linn.</i>	C.	trinervia, <i>E.M.</i>	A.
aggregata, <i>Rolfe.</i>	?	villicalyx, <i>Rolfe.</i>	CD.
capitellata, <i>Schltr.</i>		Woodii, „	B.
Cooperi, <i>Rolfe.</i>	F.		

ORDER CXXV. VERBENACEÆ.

Perhaps the most useful member of this family is *Tectona grandis*, which yields the wood commonly known as Teak. *Avicennia officinalis* is the tree which is common on the shores of the Bay, and is known in Brazil as "White Mangrove." Its bark is used for tanning leather in India. The Vervain (*Verbena officinalis*) was used by the Romans and by the Druids in religious ceremonies and incantations, and later in Europe as a tonic; but its use is now discontinued. Several others of the family have been used medicinally, and their leaves as tea, but not to any great extent. It is said that the trees of *Clerodendron* are remarkable for the sweet scent of their flowers; but this can hardly be said of our largest species (*C. glabrum*). The dried leaves of *Lippia citriodora* are infused like tea, and are also used for flavouring cream. Many species of the family are in cultivation as ornamental plants, and some of them are common in Natal.

Number of species about 700.

(Ex. UMSUSWAAN.)

Inflorescence racemose, spicate, capitate, or rarely solitary. Ovules erect.	1
Inflorescence cymose. Ovules pendulous.	3
Inflorescence capitate or spicate. Ovules pendulous.	5
1 Ovary 2-celled, cells 1-ovuled.	2
1 Ovary 4-celled, cells 1-ovuled.	
1 Ovary 2-celled, cells 2-ovuled or abortively 1-ovuled	
1 Ovary imperfectly 8-celled, cells 1-ovuled.	
2 Limb of corolla 4-lobed. Fruit of 2 dry, separate, or cohering nuts.	
2 Limb of corolla 4-lobed. Fruit a fleshy drupe.	

VERBENA.
PRIVA.
DURANTA.
LIPPIA.
LANTANA.

2 Limb of corolla 5-lobed. Fruit of 2 dry, separate, or cohering nuts.
 3 Drupe of 4 or fewer 1-celled pyrenes.
 4 Drupe a 4-celled pyrene. Leaves digitate.
 4 Drupe of 4 pyrenes 4-sulcate or semi-4-fid. Leaves simple, often ternate.
 5 Littoral trees. Embryo germinating within pericarp.

BOUCHEA.

4

VITEX.

CLERODENDRON.

AVICENNIA.

LIST OF SPECIES.

1 *Lantana, Linn.**camara, L.*
*salvifolia, Jacq.*2 *Lippia, Linn.*
asperifolia, Rich.
*nodiflora, Rich.*3 *Bouchea, Cham.*
cuneifolia, Sch.
hederacea, Sond.
*latifolia, Harv.*4 *Priva, Adans.*
*leptostachya, Juss.*5 *Verbena, Linn.*
officinalis, Linn.
*pulchella, Sweet.*6 *Duranta, Linn.*A-B. *Plumieri, Jacq.*

?

B. *7 Clerodendron, Linn.*

CD.

B. *cæruleum, N. E. Brown.*
glabrum, E.M.
A. hirsutum, Pearson.
myricoides, R. Br.
trifolium, Pearson.

AB.

A-C.

AB.

C-D.

BC. *8 Vitex, Linn.*

Z.

BC. *geminata, Pearson.*
harveyanus, „
mooiensis, „
A. Rehmanni, Gurke.
Schlechteri, „

CD.

CD.

CD.

Z ?

B. *9 Avicennia, Linn.*

A.

C. *officinalis, Linn.*

ORDER CXXVI. LABIATÆ.

A family containing many useful and well-known plants, and which is well distinguished from all other Orders, though the distinctions between the different genera are not always easily noticed. The species are most numerous in the temperate regions of the Old World, but are present also in the tropics. Most of the useful species are so well known that a mere enumeration of their popular names will, perhaps, be sufficient here. They are as follow:—Mint, Peppermint, Pennyroyal, Thyme, Savory, Balm, Basil, Sage, Marjoram, Hyssop, Lavender, Rosemary, Horehound, etc. In addition to their use as condiments and for culinary purposes, some of the species are used medicinally as stimulants, carminatives, and also as cosmetics. Rosemary is an ingredient in the well-known Eau de Cologne, and also in certain pomades for promoting the growth of the hair; oil of Lavender as an embrocation in rheumatic affections; “Ground Ivy” (*Glechoma hederacea*) as an antiscorbutic, and Horehound for coughs, etc. Amongst our indigenous species *Teucrium capense* and allied species are used medicinally by the natives, and are said to possess

useful properties, and a decoction of the leaves and stems of *Leonotis leonurus* is often used as a tonic for calves. It is a plant which is cultivated in many parts of the world and is known as the "Minaret flower."

Number of species about 2600.

KEY TO TRIBES.

Perfect stamens 4, declinate. Anthers confluent, 1-celled. A. OCIMOIDEÆ.

Perfect stamens 4, distant, straight or approaching under upper lip of corolla. Anthers 2-celled. B. SATUREINEÆ.

Perfect stamens 2, ascending. Anther cells separate. C. MONARDEÆ.

Perfect stamens 4, parallelly ascending under the vaulted upper lip of corolla. D. STACHYDEÆ.

Stamens as in Stachydeæ, but upper lip of corolla very short, deflexed or obsolete. E. AJUGOIDEÆ.

KEY TO GENERA.

A. OCIMOIDEÆ.

Corolla lobes nearly equal, 4 upper more or less connate, lowest narrower. 1

Lowest corolla lobe elongate, concave. 2

Lowest corolla lobe abruptly deflexed, saccate. 3

1 Undershrubs with panicles of lilac flowers. Dioecious. MOSCHOSMA.

1 Fruit calyx deflexed, upper tooth very large, ovate, decurrent on the tube. Corolla tube short. OCIMUM.

1 Fruit calyx as in Ocimum, but corolla tube long. ORTHOSIPHON.

2 Fruit calyx suberect with 5 subequal teeth. SYNCOLOSTEMON.

2 Fruit calyx toothed, teeth not spiny. Filaments free. PLECTRANTHUS.

2 Fruit calyx toothed, teeth not spiny. Filaments connate at base round the style. COLEUS.

2 Fruit calyx toothed, inflated. 2 Back stamens short, without anthers. HOSLUNDIA.

2 Fruit calyx truncate, circumcissed at base. AEOLANTHUS.

2 Fruit with 5, equal, spinous teeth. PYCNOTACHYS.

3 Tall herbs with dense panicles of small flowers. HYPTIS.

B. SATUREINEÆ.

Corolla subequally 4-lobed. Stamens equal. MENTHA.

Corolla 2-labiate, upper lip erect, lower 3-lobed, spreading. Stamens didynamous. MICROMERIA.

C. MONARDEÆ.

Calyx and corolla 2-labiate. Fertile anther cell at summit of the connective.

SALVIA.

D. STACHYDEÆ.

Calyx subequally 5-fid. Style 2-fid, lobes subulate.
 Calyx 8-10 toothed. Style very unequally 2-fid.
 Lower lip of corolla 3-fid, medial lobe large.
 Calyx 5-toothed. Corolla and style as in Leucas.
 Calyx 10-toothed. Style unequally 2-fid. Upper
 lobe of corolla much the largest.

STACHYS.
 LEUCAS.
 LASIOCORYS.
 LEONOTIS.

E. AJUGOIDEÆ.

Upper lip of corolla 4-parted, lower larger, concave. TEUCRIUM.
 Upper lip of corolla emarginate, lower 3-fid. AJUGA.

LIST OF SPECIES.

1 Ocimum, Linn.

obovatum, E.M.	AD.	coloratus, E.M.	B.
obtusifolium, E.M.	AB.	dolichopodus, Briquet.	C.
rariiflorum, Hochst.	B.	Draconis, Briquet.	F.
suave, Willd.	AB Z.	esculentus, N. E. Brown.	B.

2 Moschosoma, Reich.

riparia, Hochst.	AB.	elegantulus, Briquet.	C.
		floribundus, N. E. Brown.	B.
		grallatus, Briquet.	E.
		grandidentatus, Gurke.	EF.
		Kunzei, Gurke.	?

3 Orthosiphon, Bth.

inconcinus, Briquet.	C.	laxiflorus, Bih.	B.
macranthus, Gurke.	EF.	marrubioides, Hochst.	Z.
natalensis, "	DE.	nummularis, Briquet.	C.
stenophyllus, "	CD.	natalensis, Gurke.	C.
Woodii, "	B.	pachystachys, Briquet.	E.

4 Syncolostemon, E.M.

Cooperi, Gurke	?	petiolaris, E.M.	A.
densiflorus, Bth.	BD.	prætervisus, Briq.	DE.
lanceolatus, Gurke.	C.	purpuratus, Harv.	B.
macrophyllus, "	E.	Rehmanni, Gurke.	D.
parviflorus, Bth.	B.	saccatus, Bth.	AC.
ramulosus, E.M.	A.	Schlechteri, Briquet.	E.
rotundifolius, E.M.	B.	tomentosus, Bth.	AB.
Woodii, Gurke.	E.	Woodii, Gurke.	C.

6 Coleus, Lour.

sp. (J. M. Wood No. 4840). C.

7 Hoslundai, Vahl.

decumbens, Bth. Z.

5 Plectranthus, L'Herit.

arthropodus, Briquet.	BC.		
calycinus, Bth.	AB.		
ciliatus, E.M.			

8 <i>Aeolanthus</i> , <i>Mart.</i>			
canescens, <i>Gurke.</i>	F.	hyssopoides, <i>Burch.</i>	D.
parviflorus, <i>Bth.</i>	BC.	Kunzei, <i>Gurke.</i>	E.
		leptoclada, <i>Briq.</i>	
9 <i>Pycnostachys</i> , <i>Hk.</i>		lupulina, " "	A.
reticulata, <i>Bth.</i>	AC.	nigricans, <i>Bth.</i>	AB.
Schlechteri, <i>Briq.</i>		petrogenes, <i>Briq.</i>	F.
		rivularis, <i>W & E.</i>	D.
10 <i>Hyptis</i> , <i>Jacq.</i>		sessilifolia, <i>E.M.</i>	F.
pectinata, <i>Poir.</i>	A.B.	sessilis, <i>Gurke.</i>	C.
		tubulosa, <i>MacOwan.</i>	DE.
11 <i>Mentha</i> , <i>Linn.</i>			
aquatica, <i>Linn.</i>	AF.	15 <i>Leucas</i> , <i>R. Br.</i>	
sylvestris, <i>Linn.</i>	D.	glabrata, <i>Br.</i>	C.
viridis.	D.	martinicensis, <i>R. Br.</i>	AB.
12 <i>Micromeria</i> , <i>Bth.</i>			
pilosa, <i>Bth.</i>	B.	16 <i>Lasiocorys</i> , <i>Bth.</i>	
		capensis, <i>Bth.</i>	C.
13 <i>Salvia</i> , <i>Linn.</i>			
natalensis, <i>Schinz.</i>	E.	17 <i>Leonotis</i> , <i>Persoon.</i>	
obtusata, <i>Thb.</i>	CD.	dubia, <i>E.M.</i>	
Schlechteri, <i>Gurke.</i>		laxifolia, <i>MacOwan.</i>	C.
stenophylla, <i>Burch.</i>	D.	latifolia, <i>Gurke.</i>	EF.
triangularis, <i>Thb.</i>	F.	leonurus, <i>Brown.</i>	AC.
Woodii, <i>Gurke.</i>	DE.	malacophylla, <i>Gurke.</i>	CD.
		urticifolia, <i>Briq.</i>	
14 <i>Stachys</i> , <i>Linn.</i>			
aethiopica, <i>Linn.</i>	AB.	18 <i>Teucrium</i> , <i>Linn.</i>	
Bachmannii, <i>Gurke.</i>		capense, <i>Thb.</i>	C.
caffra, <i>E.M.</i>	BE.	riparium, <i>Hochst.</i>	B.
germanica, <i>Linn.</i>	D.		
grandifolia, <i>E.M.</i>	D.	19 <i>Ajuga</i> , <i>Linn.</i>	
		ophrydis, <i>Burch.</i>	BE.

ORDER CXXVII. PLANTAGINEÆ.

A small Order composed of three genera only, two of which are monotypic, and are not represented in South Africa, the remainder of the family being included in the genus *Plantago*, which gives the name to the Order. The species are most common in temperate countries, and more rare in the tropics. Many species of *Plantago* have been and still are used medicinally, and some are used in salads. One at least of our indigenous species is used medicinally by the native.

Number of species probably more than 100.

Stamens much exserted. Flowers 4-merous, spicate.

PLANTAGO.

LIST OF SPECIES.

1 <i>Plantago</i> , <i>Linn.</i>	major, <i>Linn.</i>	?
<i>Dregeana</i> , <i>Dene.</i>	A. sp. (<i>Wood</i> 4049).	D.
<i>lanceolata</i> , <i>Linn.</i>	D. sp. (,, 8858).	F.

ORDER CXXVIII. NYCTAGINEÆ.

A small family, one genus only of which is indigenous in Natal. Two, however, of the exotic genera are well known. The first, *Bougainvillea*, is a native of South America, and is common in our gardens, the other is *Mirabilis Jalapa*, or "Marvel of Peru," which was probably brought by the early settlers, and may occasionally be seen in a semi-wild state in the vicinity of the towns. Its roots are said to be purgative and emetic. Several species of *Boerhaavia* have also been used medicinally, but they are not of much value. Our species bear rather pretty flowers, but have no economic value, nor are they used by the natives in any way.

Number of species more than 200.

Calyx jointed in the middle. Upper part 5-fid.

BOERHAAVIA.

LIST OF SPECIES.

1 <i>Boerhaavia</i> , <i>Linn.</i>		
<i>ascendens</i> , <i>Willd.</i>	A.	
<i>pentandra</i> , <i>Burch.</i>	C.	

ORDER CXXIX. ILLECEBRACEÆ.

A small Order chiefly confined to temperate portions of the Northern hemisphere. None of the species are of any economic value. Two genera, each represented by a single species, occur in Natal. Both are useless weeds

Number of species about 90.

Ovary 2-4 ovuled. Leaves sub-verticillate.

POLLICHI.

Ovary 1 ovuled. Leaves alternate.

CORRIGIOLA.

LIST OF SPECIES.

1 <i>Pollichia</i> , <i>Solander.</i>	2 <i>Corriola</i> , <i>Linn.</i>	
<i>campestris</i> , <i>Solander.</i>	B-D. <i>littoralis</i> , <i>Linn.</i>	A.B.

ORDER CXXX. AMARANTACEÆ.

The plants of this Order are chiefly tropical or subtropical, but few being found in temperate, and none in cold climates. Some species of *Amarantus* and *Celosia* are common in cultivation, and are known as "Cockscombs." Several species of *Iresine* and *Alternathera* are cultivated on account of their coloured or variegated foliage. The leaves of some species of *Amarantus* are used like spinach in different countries, and our *A. Thunbergii*, better known as im-Buya, is often

used in this way *A. spinosa* has accidentally found its way into the colony and is a pestilent weed. The species of *Cyathula* and *Achyranthes* are annoying to cattle by their flower heads, which are furnished with numbers of hooked bristles, and in the autumn the tails of these animals may be seen to be felted into a solid mass by these seedvessels. Wool is also damaged by them in the localities where these plants are found; but, fortunately, they are not common in the wool-producing districts. Our single species of *Gomphrena* is an imported plant, and is thought by some persons to be a good pasture herb.

Number of species under 500.

(Ex. IMBUYA, ISINANA. COOK'S COMB.)

Anthers 2-celled. Ovary many-ovuled. Leaves alternate.	1
Anthers 2-celled. Ovary 1-ovuled. Leaves alternate or opposite.	2
Anthers 1-celled. Ovary 1-ovuled. Leaves opposite.	7
1 Stamens without alternating staminodia.	CELOSIA.
1 Stamens alternating with long 2-fid staminodia.	HERMBSTØEDTIA.
2 Lateral flowers abortive, changed into hooked bristles. Staminodia present	CYATHULA.
2 Lateral flowers abortive, changed into hooked bristles. Staminodia 0.	PUPALIA.
2 Lateral abortive flowers 0.	3
3 Stamens free. Fruit splitting across.	AMARANTUS.
3 Stamens united in a cup at base Staminodia 0.	4
3 Stamens united in a cup at base. Staminodia present.	5
4 Segments of perianth equal, sub-villous, erect.	PSIOTRICHUM.
4 Segments of perianth unequal, spreading, plumose at apex.	TRICHINIUM.
5 Stigmas 2. Staminodia triangular, entire.	ÆKVA.
5 Stigma 1, capitate.	6
5 Perianth segments sub-equal, villous. Leaves alternate.	SERICOCOMA.
6 Perianth segments unequal, glabrous. Leaves opposite.	ACHYRANTHES.
7 Stamens united in a short cup. Sepals unequal.	ALTERNANTHERA.
7 Stamens united in a long cup. Sepals equal.	GOMPHRENA.

LIST OF SPECIES.

1 <i>Celosia</i> , <i>Linn.</i>	3 <i>Amarantus</i> , <i>Linn.</i>	
<i>trigyna</i> , <i>Linn.</i>	AB. <i>paniculatus</i> , <i>Linn.</i>	D.
	<i>spinosus</i> , <i>Linn.</i>	A.
	<i>Thunbergii</i> , <i>Moq.</i>	A-D.
2 <i>Hermbstøedtia</i> , <i>Reich.</i>	4 <i>Sericocoma</i> , <i>Fenzl.</i>	
<i>caffra</i> , <i>Moq.</i>	BC. <i>angustifolia</i> , <i>Hk. f.</i>	C.
sp. (<i>J. M. Wood</i> , 3989).	Z. <i>chrysurus</i> , <i>Meisn.</i>	AB.

5 <i>Cyathula</i> , <i>Loureiro</i> .		9 <i>Achyranthes</i> , <i>Linn.</i>
<i>cylindrica</i> , <i>Moq.</i>	BC.	<i>argentea</i> , <i>Linn.</i> ?
<i>globulifera</i> , <i>Moq.</i>	AB.	<i>aspera</i> , <i>Linn.</i> AB.
sp. (<i>J. M. Wood</i> , 1823).	B.	<i>avicularis</i> , <i>E.M.</i> (<i>G. & McK.</i> , 477).
6 <i>Pupalia</i> , <i>Juss.</i>		<i>leptostachya</i> , <i>E.M.</i> C.
<i>atropurpurea</i> , <i>Moq.</i> (<i>G. & McK.</i> , 476).	?	10 <i>Alternanthera</i> , <i>Forsk.</i>
<i>lappacea</i> , <i>Moq.</i>	D.	<i>sessilis</i> , <i>R. Br.</i> A.
7 <i>Psilotrichum</i> , <i>Blume</i> .		11 <i>Gomphrena</i> , <i>Linn.</i>
<i>africanum</i> , <i>Oliv.</i>	Z.	<i>globosa</i> , <i>Linn.</i> A.
<i>africanum</i> , var. (<i>J. M. Wood</i> , 3936).	Z.	12 <i>Trichinium</i> , <i>R. Br.</i>
8 <i>Aerva</i> , <i>Forsk.</i>		<i>Zeyheri</i> , <i>Moq.</i> ?
<i>lanata</i> , <i>Juss.</i>	AB.	

ORDER CXXXI. CHENOPODIACEÆ.

An Order containing many plants that are useful to man, the well-known "Spinach" is *Spinacia oleracea*, and several other members of the Order are similarly used. The "White Beet," or Mangold Wurzel is *Beta cyclo* and the Beet is *Beta rapa*. Several species of Atriplex are highly prized as fodder plants, but they have not been found to succeed in Natal, as they appear to require a saline soil. The young shoots of *Salicornia* are eaten in Europe, and are also pickled as "Samphire." The true Samphire is, however, a *Crithmum*, and belongs to the Order Umbelliferae.

Number of species more than 500.

(Ex. *UDONQUABATA*.)

Stems or branches jointed, succulent, leafless.	SALICORNIA.
Stems or branches not jointed, leafy.	1
1 Leaves expanded, petiolate. Perianth 5 parted.	CHENOPODIUM.
1 Leaves narrow, linear, sessile. Perianth globose.	CHENOLEA.

LIST OF SPECIES.

1 <i>Chenopodium</i> , <i>Linn.</i>		2 <i>Chenolea</i> , <i>Thb.</i>
<i>ambrosioides</i> , <i>Linn.</i>	A.	<i>diffusa</i> , <i>Thb.</i> A.
<i>Botrys</i> , <i>Linn.</i>	BC.	
<i>murale</i> , <i>Linn.</i>	AB	3 <i>Salicornia</i> , <i>Linn.</i>
		<i>herbacea</i> , <i>Linn.</i> A.

ORDER CXXXII. PHYTOLACCACEÆ.

One genus only of this Order is indigenous in Natal, and of the three species enumerated, one has certainly been introduced. The leaves of some of the exotic species have been used as pot-herbs, but most of them have poisonous properties. *Phytolacca decandra*, the American "Pokeweed," bears purple berries, which have been used

for colouring wine and confectionery ; but their use for this purpose is in some countries now forbidden. Our two indigenous species—*P. stricta* and *P. abyssinica* bear thick tuberous roots, and are known to the natives as u-Mahaden. These roots are said to be highly poisonous. The berries of *P. octandra* are used in the West Indies instead of soap, and it is quite probable that its roots are also poisonous. *P. dioica* is a tree, native of South America, and is commonly known as "Belhambra" or "Bella-sombra." Its trunk and roots are much swollen, but the wood is soft and of no value. In South Africa some years ago it had a great reputation as a wind break, but it is now seldom planted.

Number of species about 60.

Flowers 3 bracteate. Stamens 5-30. Drupes fleshy. PHYTOLACCA.

LIST OF SPECIES.

1 *Phytolacca*, Linn.

<i>abyssinica</i> , Hoffm.	BC.
<i>octandra</i> , Linn,	BC.
<i>stricta</i> , Hoffm.	B.

ORDER CXXXIV. POLYGONACEÆ.

This Order will, perhaps, be best known from the fact that it includes the different species of Rhubarb. The medicinal or "Turkey" Rhubarb is the rootstock of *Rheum palmatum*, *R. officinale*, and probably of other species also, especially of those of *R. Rhaponticum*, which is the species cultivated for its petioles, which are so much used in cookery. *R. undulatum* is similarly used, and there are numerous varieties. The common "Dock" is well known and is a species of Rumex. Most of the species of this genus are troublesome weeds ; but the leaves of *R. patentia*, known in some parts of England as "Patient leaves," and *R. acetosa* as "Sorrell," are used as substitutes for Spinach. *Fagopyrum esculentum* is the Buckwheat, and its seeds are largely used as substitutes for the cereals, and as food for animals. Some other species of the Order are used both as food and medicinally, but they are not of much importance.

Number of species more than 600.

(Ex. DOCK; IVENDHLE.)

Perianth 5-fid. Stamens 8. Anthers versatile. Stigma capitate. 1

Perianth 4-6 fid. Stamens 4-6. Anthers erect. Stigmas pencilled. 2

1 Nuts 3-winged.	OXYGONUM.
1 Nuts not winged, compressed, or 3-angled.	POLYGONUM.
2 Outer 3 lobes of perianth in fruit largest, spinous.	EMEX.
2 Outer 3 lobes of perianth in fruit smallest, not spinous.	RUMEX.

LIST OF SPECIES.

1 <i>Oxygonum</i> , <i>Burch.</i>		3 <i>Emex</i> , <i>Neck.</i>	
<i>Dregeanum</i> , <i>Meisn.</i>	A.B.	<i>australis</i> , <i>Steinh.</i>	?
2 <i>Polygonum</i> , <i>Linn.</i>		<i>spinosa</i> , <i>Campd.</i>	A-C.
<i>alatum</i> , <i>Hamilton.</i>	B.		
<i>aviculare</i> , <i>Linn.</i>	E.	4 <i>Rumex</i> , <i>Linn.</i>	
<i>lanigerum</i> , <i>R. Br.</i>	A.	<i>acetosella</i> , <i>Linn.</i>	D.
<i>lapathifolium</i> , <i>Linn.</i>	A.	<i>Ecklonianus</i> , <i>Meisn.</i>	B.
<i>minus</i> , <i>Huds.</i> (<i>G. & McK.</i> 482).	?	<i>lanceolatus</i> , <i>Thb.</i>	?
<i>serrulatum</i> , <i>Lag.</i>	C	<i>nepalensis</i> , <i>Spreng.</i>	?
<i>tomentosum</i> , <i>Willd.</i>	A.B.	<i>obtusifolius</i> , <i>Linn.</i>	
		<i>sagittatus</i> , <i>L.</i>	A-C.

ORDER CXXXV. PODOSTEMACEÆ.

A small family of tropical and subtropical plants, the members of which are found in rocky streams and rivulets. The largest Natal species is *Hydrostachys natalensis*, which is found growing in masses on stones and rocks in the Umvoti, Tugela, and other rivers and their tributaries. I have included the genus *Tristicha* in the Key, since it is stated in "Harvey's Genera of South African Plants" that two species occur in Natal, but I have not met with them, nor is Natal credited with any species of this genus in the Genera Plantarum. Five species are enumerated of which two are said to be found in Madagascar. No species of the Order have any special value.

Number of species about 120.

Flowers dioecious. Perianth 0. Stamen 1. Ovary 1 celled.			HYDROSTACHYS.
Flowers bisexual. Stamens 2, monadelphous.			
Perianth spathaceous.			SPHÆROTHYLAX.
Flowers bisexual. Stamen 1. Perianth 3 parted.			TRISTICHA.

LIST OF SPECIES.

1 <i>Hydrostachys</i> , <i>Thouars.</i>		3 <i>Tristicha</i> , <i>Thou.</i>	
<i>natalensis</i> , <i>Wedd.</i>	A-D.	sp.	?
		sp.	?
2 <i>Sphærothylax</i> , <i>Bisch.</i>			
<i>algiformis</i> , <i>Bisch.</i>		?	

ORDER CXXXIX. PIPERACEÆ.

Several species of *Piper* are used in different countries, but the best known is *Piper nigrum*, which yields the black "Pepper" of commerce. White pepper is the same seed whose outer dark-coloured covering has been removed by steeping the seeds in water and then using friction. Long pepper is the entire fruit spike of *P. longum*. Cubeb is the fruit of *P. Cubeba*. *P. betel* has bitter aromatic leaves which are used by the Indians for chewing when

mixed with lime and crushed Areca nut ; but its frequent use blackens the teeth, and is harmful to the gums. The "Ava" or "Kava" is *P. methysticum*, and its roots are used in the Pacific Islands for preparing an intoxicating liquor. Some of the American species are used medicinally but are of little value.

Number of species about 1000.

Flowers dioecious, in dense cylindrical spikes. Jointed shrubs.

Flowers bisexual. Prostrate herbs.

PIPER.
PEPEROMIA.

LIST OF SPECIES.

1 *Piper, Linn.*
capense, Linn. f.

2 *Peperomia, Ruiz. & Pav.*
BC. *caffra, E.M.* BC.
sp. C-D.

ORDER CXLII. MONIMIACEÆ.

The only South African member of this family was formerly known as *Xylosma monospora*, and classed with Bixinece, but has lately been removed to this Order, and the name altered to *Xymalos*, which is an anagram of the name by which it was figured and described in *Thesaurus Capensis*, Plate 181. It is a small tree of none, or little economic value.

Number of species about 150.

Leaves entire. Fruit a 2-8 seeded indehiscent berry.

XYMALOS.

1 *Xymalos, Baill.*
monospora, B.

B-E.

ORDER CXLIII. LAURINEÆ.

Several species belonging to this Order are well known and useful trees. The common Laurel (*Laurus nobilis*) is a native of Europe. Its leaves are used for flavouring and other purposes. Cinnamon is the bark of the young shoots of *Cinnamomum officinale*, and Cassia bark that of *C. cassia*. Camphor is obtained by distillation from the wood of *C. camphora*. The Avocado Pear is the fruit of *Persea gratissima*. An oil is obtained from the fruits, and the seeds yield a black dye. Many species of the Order yield valuable timber. Of our own native species the only valuable tree is *Ocotea bullata*, the timber of which is known as "Stinkwood." Some of the species of *Cryptocarya* are large trees, while Cassytha is a leafless parasite.

Number of species about 900.

(EX. STINKWOOD.)

Anthers 2-celled. Fruit enclosed in perianth tube.

Trees or shrubs.

Anthers 2-celled. Fruit enclosed in perianth tube.

Leafless parasites.

Anthers 4-celled. Fruit sitting in cup-like base of perianth.

CRYPTOCARYA.

CASSYTHA.

OCOTEA.

LIST OF SPECIES.

1. <i>Cryptocarya, R. Br.</i>	2 <i>Ocotea, Aublet.</i>	
<i>acuminata, Schinz.</i>	AB	<i>bullata, E. Mey.</i>
<i>latifolia, Sond.</i>	?	C.
sp., (<i>J. M. Wood, 1402</i>)	B.	3 <i>Cassytha, Linn.</i>
sp., (<i>J. M. Wood, 3033</i>)	B.	<i>capensis, Meisn.</i>
sp., (<i>J. M. Wood, 8822</i>)	DF.	?

ORDER CXLIV. PROTEACEÆ.

An Order almost confined to the Southern Hemisphere, and chiefly to Australia and South Africa; the seeds of some of the species are eatable, and the flowers of others are much sought after by bees, hence some species of Protea are known locally as "Sugar bushes;" the wood of one or more species is used in South Africa for wagon work, and also in the household for firewood.

Number of species about 950.

(Ex. SUGAR BUSH).

Flowers in terminal or axillary heads. Trees or shrubs. PROTEA.
Flowers in dense elongate cylindrical spikes. Trees. FAUREA.

LIST OF SPECIES.

1 <i>Protea, Linn.</i>	2 <i>Faurea, Harv.</i>	
<i>abyssinica, Willd.</i>	E-F.	<i>saligna, Harv.</i>
<i>hirta, Klotzsch.</i>	A-D.	A.B.
<i>lanceolata, E. M.</i>	E.	
<i>Roupelliæ, Meisn.</i>	E.	

ORDER CXLV. THYMELEACEÆ.

A family of plants found in tropical and subtropical countries, especially in the Southern Hemisphere. Some of the species possess deleterious properties and others have been used medicinally. Paper and cordage have been made from the bark of some of the species, and "the beautiful substance called 'Lace-Bark' is made from the bark of *Daphne linearia*."

Our species are shrubs or undershrubs, one only, *Dais cotinifolia* attaining the size of a tree. The roots of one or more species each of *Lasiosiphon* and *Gnidia* are used by the natives as remedies for snake bites, and it is thought by some authorities that they may be found useful in European practice.

Number of species about 360.

Perianth without scales or glands in throat or tube.	1
Perianth with 4-12 scales or glands in throat or tube.	2
1 Flowers pedicillate, umbellate, umbels terminal.	PEDDIEA.
1 Flowers sessile in heads or spikes, or axillary.	3

3 Anthers subsessile within throat of perianth.	ARTHROSOLEN.
3 Anthers on setaceous or subulate filaments, some or all exserted.	4
4 Flowers in terminal involucrated heads.	DAIS.
4 Flowers axillary or spiked. Nuts dry.	PASSERINA.
2 Perianth limb 4-parted. Stamens 4, included.	STRUTHIOLA.
2 Perianth limb 4-parted. Stamens 8, upper row or all exserted.	GNIDIA.
2 Perianth limb 5-parted. Stamens 10, upper row or all exserted.	LASIOSIPHON.

LIST OF SPECIES.

1 <i>Dais</i> , <i>Linn.</i>			
<i>cotinifolia</i> , <i>Harv.</i>	CE.	sp. (<i>Englerodaphne leiosiphon</i> , <i>Gilg.</i>)	B.C.
2 <i>Arthrosolen</i> , <i>C. A. Mey.</i>			
<i>gymnostachys</i> , <i>C. A. M.</i>	E.	6 <i>Lasiosiphon</i> , <i>Fresen.</i>	D-F.
" " <i>var.</i>	A-F.	<i>caffer</i> , <i>Meisn.</i>	AB.
3 <i>Passerina</i> , <i>Linn.</i>		<i>Meisnerianus</i> , <i>Endl. var.</i>	
<i>filiformis</i> , <i>L.</i>	BC.	sp. <i>nr. L. Meisnerianus</i> , <i>Endl.</i>	A.
<i>ericoides</i> , <i>L.</i>	DE.	sp. <i>nr. L. Meisnerianus</i> , <i>Endl.</i>	DE.
sp., (<i>Wood</i> 1504)	A.	<i>macropetalus</i> , <i>Meisn.</i>	AB.
sp., (<i>Thode</i>).	F.	<i>linifolius</i> , <i>Dcne.</i>	DE.
4 <i>Struthiola</i> , <i>Linn.</i>		sp. <i>nr. L. linifolius</i> , <i>Dcne.</i>	A.
sp. <i>nr. S. parviflora</i> , <i>Bark.</i>	F.	sp. " <i>nr. L. splendens</i> ", <i>Engl.</i>	EF.
sp. <i>nr. S. Mundtii</i> , <i>Eckl.</i>	B-C.	" " <i>anthylloides</i> , <i>Meisn. var.</i>	EZ.
5 <i>Gnidia</i> , <i>Linn.</i>		sp. <i>nr. " "</i>	A-B.
<i>nodiflora</i> , <i>Meisn.</i>	A-B.	sp. <i>nr. " "</i>	Z.
sp. ? (<i>G. coriacea</i>), <i>Meisn.</i>	BC.	<i>Kraussii</i> , <i>Meisn. var.</i>	B.
sp. <i>nr. G. coriacea</i> , <i>Meisn.</i>	B-C.	sp. <i>nr. L. Kraussii</i> , <i>Meisn.</i>	B-C.
<i>microcephala</i> , <i>Meisn.</i>	A-E.	sp. (<i>Sim</i> , 2935, 2938).	Z.
<i>ovalifolia</i> , <i>Meisn.</i>	A-C.	7 <i>Peddeia</i> , <i>Harv.</i>	
<i>phaeotricha</i> , <i>Gilg.</i>	E-F.	<i>africana</i> , <i>Harv.</i>	B-E.
		sp. (<i>Sim</i> , 2940).	BZ.

ORDER CXLVIII. LORANTHACEÆ.

By far the larger number of the members of this Order are parasitical on trees and shrubs, the exceptions being *Nuytsia*, an Australian genus, and a few species of *Loranthus*. The Mistletoe is well-known in Europe as *Viscum album*, from its fruits and also from the fruit of others of this genus, and of *Loranthus*, bird lime is prepared, and it is said that its abundance in the fruit depends very much upon the stock upon which the parasite grows. The leaves of

some of the species have been used medicinally, but do not now find a place in European practice, but are used by our natives as a remedy for lumbago.

Number of species more than 500.

Flowers perfect. Perianth double. Style filiform. **LORANTHUS.**

Flowers unisexual. Perianth single. Style short or wanting

VISCUM.

LIST OF SPECIES.

1 Loranthus, Linn.

Dregei, *E. & Z.*
Kraussiana, *Meisn.*
natalitius, *Meisn.*
" var., minor.
quinquenervius, *Hochst.*
Sandersoni, *Harv.*

2 Viscum, Linn.

A-C.	continuum, <i>E. M.</i>	A.
A B.	dichotomum, <i>Don.</i>	?
A.	obovatum, <i>Harv.</i>	A.
A.	obseurum, <i>Thb.</i>	A.
A.	rotundifolium, <i>Thb.</i>	A.
Z.	sp. (<i>J. M. Wood</i> , No. 3864).	Z.
	sp. (,, 3999).	A.
	sp. (,, 4145).	BC.

ORDER CXLIX. SANTALACEÆ.

Santalum album is the well known "Sandalwood" tree, the wood of which is used for cabinet work and also medicinally, and for burning at funerals in India and Ceylon. The leaves of *Colpoon compressum* are said to be equal to Sumach for tanning leather; the shrub is rare in Natal, but common in some parts of Cape and Orange River Colonies. Several of our native species of *Thesium* are as yet undescribed.

Number of species about 220.

Perianth tube prolonged above the ovary.

1

Perianth tube not prolonged above the ovary.

2

1 Flowers axillary, 1-3 together. Rambling shrub.	OSYRIDOCARPUS.
1 Flowers cymose, or variously disposed.	THESIUM.
2 Small shrubs. Leaves mostly opposite.	COLPOON.
2 Small shrubs. Leaves alternate.	OSYRIS.

LIST OF SPECIES.

1 Thesium, Linn.

angulosum, *A. D. C.*
spicatum, *L.*
junceum, *Bernh.*
sp., (*J. M. Wood*, 4487)
sp., (,, 3582)
sp., (,, 756)
sp., (,, 249)
sp., (,, 3574)
sp., (,, 8970)
sp., (,, 1141)

AB.
?
A-D.
DE.
CD.
A.
A-B.
D-E.
Z.
B.

2 Osyridocarpus, A. D. C.

natalensis, *A. D. C.*

AB

3 Colpoon, Bergius.

compressum, *Berg.*

BC.

4 Osyris, Linn.

abyssinica, *Hochst.*

?

ORDER CLI. EUPHORBIACEÆ.

A large family containing many plants with highly poisonous properties, others medicinal and some of economic value. Probably one of the best known is the Castor Oil plant (*Ricinus communis*) from whose seeds the Castor Oil of commerce is obtained; the seeds of *Croton tiglium* yield a still more drastic purgative. Many species of the genus *Euphorbia* yield a milky sap, which is a strong vesicant, and highly poisonous, and this is especially the case with the arborescent species, several of which are found in Natal; the sap of some of the herbaceous species with normal leaves has been prescribed medicinally, but all are dangerous and should be used with caution. Some exotic species of the Order such as *Excoecaria agallocha* and *Hippomane mancinella* are highly dangerous, even the smoke of the burning wood is said to be so, though probably its effects have been somewhat exaggerated. It is, however, certain that the sap of some of our indigenous species causes intense pain if it should accidentally get into the eye even in small quantity, but whether blindness ensues from this cause is uncertain. Several of the exotic species yield India-rubber, and it has been extracted from some of our native species, but not I think in payable quantities. Several species yield eatable fruits, such as *Aleurites triloba* from the Moluccas, and *Cicca disticha* from India. The Manioc or Cassava is the root of at least two species of *Manihot*, of which one species, *M. utilissima* is in common use in most tropical countries; the juice is poisonous, but this property is destroyed by heat; the grated roots are pressed to extract the juice and then made into cakes, biscuits, &c; the juice is used in the West Indies in the preparation of what is called "Pepper pot". Tapioca is the starch of the Cassava root dried on hot plates. Of our indigenous species *Excoecaria africana* yields a handsome wood, but is not obtainable in large quantities, nor could the supply be kept up if it were introduced in commerce as it is a tree of slow growth. *Euphorbia pilulifera* is fairly common in the coast districts, but has most likely been introduced, it is in use at Home as a remedy for Asthma; and finally the sap of *Synadenium arborescens* is very virulent.

Number of species more than 3,000.

Ovules 1 in each cell of ovary.
Ovules 2 in each cell of ovary.

A.
B.

A. UNIOVULATE.

Several monandrous and a single female flower in a fleshy 4-5-lobed involucre. Bracteoles linear.

EUPHORBIA.

Several monandrous and a single female flower in a hyaline 5-lobed involucre. Stamens in 5 fascicles. Bracteoles linear, lacerate.

SYNADENIUM.

Staminate and pistillate flowers separate.

1 Staminate (and sometimes pistillate) flowers with petals.

1

2

1 Staminate flowers without petals.	4
2 Stamens united in a central column.	3
2 Stamens free. Calyx 5-parted. Petals 5, clawed.	CROTON.
3 Stamens 10, petals longer than calyx.	JATROPHA.
3 Stamens 5, petals short.	CLUYTIA.
4 Stamens many.	5
4 Stamens few (seldom more than 20).	6
5 Stamens polyadelphous, filaments branched.	RICINUS.
5 Stamens monadelphous. Flowers enclosed in 2 leafy bracts.	DALECHAMPIA.
5 Stamens free. Flowers diœcious. Sepals 2-4, valvate.	CLAOXYLON.
5 Stamens free. Flowers diœcious. Sepals 5, imbricate.	GELONIUM.
6 Ovary 2-celled, capsule 2-coccus.	7
6 Ovary 3-4-celled, capsule 3-4-coccus.	9
7 Tree with large, rounded petiolate leaves.	MALLOTUS.
7 Slender herbs.	8
8 Stamens 4-7. Flowers racemose. Leaves alternate.	LEIDESIA.
8 Stamens 2-3. Flowers cymose or paniculate. Leaves alternate.	SEIDELIA.
9 Stamens 1-8.	10
9 Stamens 8-16.	11
10 Male perianth 3-parted, female 3-8-parted, pectinate-pinnatifid.	TRAGIA.
10 Perianth 3-fid, or parted. Trees or shrubs.	EXCŒCRIA.
11 Styles 3, divergent, multifid, coloured.	ACALYPHA.
11 Styles 3, deeply 2-fid.	ADENOCLINE.

B. BIOVULATE.

Flowers with petals. Calyx 5-fid. Trees.

BRIDELIA.

1

Flowers without petals.

CYCLOSTEMON.

2

2 Herbs or undershrubs.

PHYLLANTHUS.

3

1 Stamens many, united in a central column surrounded by glands.

ANTIDESMA.

4

1 Stamens free.

NOTOBUXUS.

5

2 Trees or shrubs,

3 Diœcious. Ovary 2-celled. Fruit a drupe. Small tree.

3 Monoœcious. Ovary 3-celled. Fruit a capsule crowned by the style. Shrub.

LIST OF SPECIES.

1 <i>Euphorbia</i> , <i>Linn.</i>	epicyparissias, <i>E.M.</i>	A.
albovillosa, <i>Pax.</i>	?	A-C.
bupleurifolia, <i>Jacq.</i>	B.	?
cervicornis, <i>Boiss.</i>	A.	A.
cuspidata, <i>Bernh.</i>	F.	A.
	Gueinzii, <i>Boiss.</i>	

Euphorbia, <i>Continued.</i>		
hypericifolia, <i>Linn.</i>	A.	9 Orotón, <i>Linn.</i>
indica, <i>Lam.</i>	A.	gratissimum, <i>Burch.</i>
livila, <i>E.M.</i>	A.	sylvaticus, <i>Hochst.</i>
natalensis, <i>Bernh.</i>	A.	
oxystegia, <i>Boiss.</i>	A.	10 Oluytia, <i>Ait.</i>
peplus, <i>Linn.</i>	A.	alaternoides, <i>Linn.</i>
pilulifera, <i>Linn.</i>	A.	heterophylla, <i>Thb.</i>
procumbens, <i>Mill.</i>	A.	hirsuta, <i>Mull. Arg.</i>
rhombifolia, <i>Boiss.</i>	C.	natalensis, <i>Berhn.</i>
sanguinea, <i>E.M.</i>	A-C.	ovalis, <i>Sond.</i>
striata, <i>Thb.</i>	A-E.	pulchella, <i>Linn.</i>
Tirucalli, <i>L.</i>	A.	Schlechteri, <i>Pax.</i>
sp., (Schlechter, 3245)	CD.	sp. (<i>J. M. Wood</i> , 1990)
sp., (<i>Wood</i> , 4090)	A.	sp. (<i>Govt. Herb.</i>) 8782
sp., (, 9129)	A.	sp. (<i>J. M. Wood</i> 8874)
2 Synadenium, <i>Boiss.</i>		11 Olaoxylo, <i>Jussieu.</i>
arborescens, <i>Hk. f.</i>	AB.	capense, <i>Baill.</i>
3 Notobuxus, <i>Oliver.</i>		sp. (<i>J. M. Wood</i> , 1391, 1089)
natalensis, <i>Oliver.</i>	AB.	AZ.
4 Bridelia, <i>Willd.</i>		A.
micrantha, <i>Planch.</i>	AB.	
5 Phyllanthus, <i>Linn.</i>		12 Leidesia, <i>Mull. Arg.</i>
genistoides, <i>Sond.</i>	A.	capensis, <i>Mull. Arg.</i>
glaucophyllus, <i>Meisn.</i>	AB.	B.
myrtaceus, ? <i>G. & McK.</i> , 1162	?	
tenellus, <i>Roxb.</i>	A.	13 Seidelia, <i>Baill.</i>
sp. (<i>J. M. Wood</i> , 855, 1765)	AB.	mercurialis, <i>Baill.</i>
sp. (, 4268)	DE.	?
sp. (, 4414)	C.	
6 Cyclostemon, <i>Blume.</i>		14 Adenocline, <i>Turcz.</i>
argutus, <i>Mull. Arg.</i>	AB.	mercurialis, <i>Turcz.</i>
natalensis, <i>Oliv.</i>	A.	pauciflora, <i>Turcz.</i>
7 Antidesma, <i>Linn.</i>		serrata, <i>Turcz.</i>
venosum, <i>E.M.</i>	AB.	
8 Jatropha, <i>Kth.</i>		15 Acalypha, <i>Linn.</i>
hirsuta, <i>Hochst.</i>	A.B.	angusta, <i>Sond.</i>
natalensis, <i>Mull. Arg.</i>	CD.	glabrata, <i>Thb.</i>
Zeyheri, <i>Sond.</i>		Eckloni, <i>Baill.</i>
		peduncularis, <i>Meisn.</i>
		petiolaris, <i>Krauss.</i>
		Schluzii, <i>Pax.</i>
		sp. (<i>J. M. Wood</i> , 1241)
		sp. (, 4552)
		sp. (, 4103)
		sp. (, 404)
		sp. (<i>Govt. Herb.</i> , 3737)
		AB.
		Z.
16 Mallotus, <i>Lour.</i>		
capensis, <i>Mull. Arg.</i>		AB.

17 <i>Ricinus</i> , <i>Linn.</i>		sp. (<i>J. M. Wood</i> , 991)	B.
<i>communis</i> , <i>Linn.</i>	A-C.	sp. (, 7534)	C.
18 <i>Dalechampia</i> , <i>Linn.</i>		20 <i>Tragia</i> , <i>Linn.</i>	
<i>capensis</i> , <i>Spreng.</i>	A.B.	<i>durbanensis</i> , <i>O. Kuntze</i> .	A.
19 <i>Excoecaria</i> , <i>Linn.</i>		<i>Schlechteri</i> , <i>Pax</i> .	A.
<i>africana</i> , <i>Mull. Arg.</i>	A.	sp. (<i>Govt. Herb.</i> , 8881)	CD.
<i>reticulata</i> , <i>Mull. Arg.</i>	A.	sp. (, , 7570)	CD.
sp. (<i>J. M. Wood</i> , 954)	B.	21 <i>Gelonium</i> , <i>Roxb.</i>	
		<i>africanum</i> , <i>Mull. Arg.</i>	A.

ORDER CLIII. URTICACEÆ.

The genus from which this family takes its name is *Urtica*, and the common stinging nettle is *Urtica dioica*; this genus includes some 30 species, most if not all of which are furnished with stinging hairs, as also are those of some of the nearly related genus *Fleurya*, but the most virulent of all of them are probably one or more species of *Laportea*, an Australian species of this genus which is said to cause much suffering or even death to animals which have been much in contact with it. An Indian species emits when bruised so "irritant an effluvia as to cause a copious flow of saliva and mucus from the nose and eyes for many hours, and sometimes to produce violent fever, and a Timor species of *Urtica* is said to have caused death. The different species of *Morus* known popularly as "Mulberries" belong to this Order, and are cultivated for their fruit, and also for their leaves which are used as food for silkworms. The species of *Ficus* or "Figs" are trees or climbing shrubs many of which are parasitical in their early life, and after having killed their host lead an independant existence; some of the species yield caoutchouc; the most important of these is *Ficus elastica*, a native of India, and some of the other species are the food plants of the "Lac" insect. What is popularly known as "China Grass" is the fibre from the bark of two or more species of *Boehmeria*, and is rapidly becoming an important article of commerce. The "Bread-fruit" is *Artocarpus incisa*, and the "Jack" *A. integrifolia*, and both belong to this Order, as also does *Brosimum galactodendron*, the so-called "Cow tree" of Venezuela, the useful properties of which have most likely been greatly exaggerated, as also have the deleterious properties of *Antiaria toxicaria*, the "Upas" tree about which so many highly coloured reports have been spread. Finally several species of the Order yield valuable wood, and the bark of others has been used medicinally.

Number of species about 1500.

Ovules pendulous.	A.
Ovules erect.	B.

A. OVULES PENDULOUS.

Flowers monœcious or polygamous, cymose or solitary in the axils. Fruit a drupe.

Flowers unisexual, enclosed in a fleshy receptacle.	FICUS.
Flowers dioecious, males panicled, female sessile.	CANNABIS.
1 Flowers polygamous or trimorphous.	2
1 Flowers monococious. Style arms 2, persistent, villous.	CHÆTACHME.
2 Male perianth lobes imbricate. Styles deciduous.	CELTIS.
2 Male perianth valvate. Styles feathery, persistent.	TREMA.
B. OVULES ERECT.	
Male flowers with 3-5 stamens.	1
Male flowers with 1 stamen.	5
1 Leaves or petioles with stinging hairs.	2
1 Leaves without stinging hairs.	4
2 Leaves opposite. Achenes equal sided.	URTICA.
2 Leaves alternate. Achenes oblique.	3
3 Stigmas ovate or linear. Herbs.	FLEURYA.
3 Stigmas penicillate, capitate. Shrubs.	URERA.
4 Perianth of female flowers tubular, with 2-4-toothed orifice enclosing the ovary.	POUZOLSLIA.
5 Male and female flowers together in involucrated glomerules.	6
5 Male and female flowers together in nude glomerules.	AUSTRALINA.
6 Perianth of male flowers 4, rarely 3-lobed.	PIRIETARIA.

LIST OF SPECIES.

1 <i>Celtis</i> , <i>Linn.</i>	6 <i>Urtica</i> , <i>Linn.</i>
<i>Kraussiana</i> , <i>Bernh.</i>	<i>urens</i> , <i>Linn.</i>
2 <i>Trema</i> , <i>Lour.</i>	
<i>bracteolata</i> , <i>Blume.</i>	
3 <i>Chætachme</i> , <i>Planch.</i>	7 <i>Fleurya</i> , <i>Gaud.</i>
<i>aristata</i> , <i>Planch.</i>	<i>grossa</i> , <i>Wedd.</i>
<i>nitida</i> , <i>Planch & Harv.</i>	<i>peduncularis</i> , <i>Wedd.</i>
4 <i>Cannabis</i> . <i>Linn</i>	sp. (Wood 1880)
<i>sativa</i> , <i>Linn.</i>	sp. (", 716)
5 <i>Ficus</i> , <i>Linn.</i>	sp. (Govt. Herb. 4854)
<i>capensis</i> , <i>Thb.</i>	8 <i>Urera</i> , <i>Gaud.</i>
<i>cordata</i> , <i>Thb.</i>	<i>tenax</i> , <i>N.E.B.</i>
<i>mapumulo</i> , <i>Gerr. MSS.</i>	sp. (J. M. Wood 1803)
<i>natalensis</i> , <i>Hochst.</i>	
<i>retusa</i> , <i>Linn.</i>	9 <i>Pouzolsia</i> , <i>Gaud.</i>
sp. (Govt. Herb. 7291)	<i>procridioides</i> , <i>Wedd.</i>
sp. (", 999)	
sp. (Wood 1361)	10 <i>Australina</i> , <i>Gaud.</i>
sp. (<i>Sycomorus hirsutus</i> , <i>Sond.</i>)	<i>acuminata</i> , <i>Wedd.</i>
sp. (", <i>capensis</i> , <i>Miquel.</i>)?	
sp. (<i>Urostigma Thunbergii</i> , <i>Miquel.</i>)	11 <i>Parietaria</i> , <i>Tourn.</i>
	<i>pilosa</i> , <i>Willd.</i>

ORDER CLVII. MYRICACEÆ.

The genus from which this Order takes its name is the only one of the family, and includes some 25 species which are widely distributed. They are shrubs or small trees, the bark of one species has been used medicinally, and the root of another is emetic and purgative. The berries of some of the species are covered with a waxy secretion, and this wax when separated has been, and still no doubt is, used in the manufacture of candles. *Myrica Gale* the "Sweet Gale" or "Bogwort" is the badge of the Campbells. Our indigenous species have no economic value.

Flowers unisexual. Shrubs with simple serrate leaves. MYRICA.

LIST OF SPECIES.

1 <i>Myrica</i> , <i>Linn.</i>	sp. (<i>J. M. Wood</i> 9551).	A.
<i>ethiopica</i> , <i>Linn.</i>	?	<i>sp. (Govt. Herb.</i> 3553).
sp. (<i>J. M. Wood</i> 985).	AB.	CD.

ORDER CLX. SALICINÆ.

A family containing two genera only, *Salix* the "Willow," and *Populus* the "Poplar," the first named having the largest number of species. The bark of several species of *Salix* yield salicine, which is used medicinally, and the buds of some species of *Poplar* have also been used as medicine. The shoots of several species of *Salix* are valued as "Osiers," and the wood of many species of both genera for lightness and strength, and is used for many purposes. It is as yet doubtful whether more than one species is indigenous in Natal.

Number of species 150 to 200.

A shrub or small tree with narrow linear leaves. SALIX.

1 <i>Salix</i> , <i>Linn.</i>	
<i>Woodii</i> , <i>Seem.</i>	DE.

ORDER CLXIII. CERATOPHYLLEÆ.

A small family of aquatic plants including one genus only, and though 8 or 10 species have been enumerated, it is thought that there are most likely not more than two or three distinct species. They have no useful properties, and are quite without value. Our only species was found in a stagnant pool near the mouth of the Umgeni, and it has not been specifically identified on account of the absence of complete specimens.

A monoecious aquatic plant with elongated branches and linear leaves.

CERATOPHYLLUM.

1 <i>Ceratophyllum</i> , <i>Linn.</i>	
sp. (<i>J. M. Wood</i> 4000).	A.

GYMNOSPERMEÆ.

Flowers in catkins. Trees.

CONIFERÆ CLXV.

Flowers in cones. Palm or fern-like plants.

CYCADACEÆ CLXVI.

ORDER CLXV. CONIFERÆ.

A family of trees, rarely shrubs, whose uses are many and various; the timber of many of the species is in use all over the world, and is known as "Pine," Deal, Pitch-Pine, &c, Turpentine is obtained by incisions made in the bark, the products being afterwards refined. Venice Turpentine is a superior kind yielded by *Larix europaea*. Rosin, Pitch and Tar are the produce of many species, and are obtained from the residuum after the more volatile turpentine has been extracted. Canada balsam is yielded by *Abies balsamina*, and Gum Dammar by the different species of Dammara, natives of New Zealand, where the trees grow to a large size; their wood is also much used and is known as "Kauri Pine," a name which is often confused with "Karri," a valuable wood yielded by *Eucalyptus diversicolor*. Our native species of Podocarpus are known as "Yellowwood," and our only species of Callitris as "Cedar" or "Cypress," the latter tree being found in certain parts of the Drakensberg only.

(Ex. FIR. CYPRESS. YELLOWWOOD).

Ovules solitary or sub-solitary in lax spikes.

PODOCARPUS.

Ovules at bases of peltate hard scales, arranged in
small capitate cones.

CALLITRIS.

LIST OF SPECIES.

1 <i>Callitris</i> , <i>Vent.</i> <i>cupressoides</i> , <i>Schrad.</i>	2 <i>Podocarpus</i> , <i>L'Herit.</i> <i>elongatus</i> , <i>L'Herit.</i> <i>Thunbergii</i> , <i>Hook.</i>	A-C. B-E.
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ORDER CLXVI. CYCADACEÆ.

A small Order, two genera of which are found in Natal. The pith of the stem of some of the species yields a sort of starch, hence some of them are known as "Sago Palms;" the stems of our native species of *Encephalartos* are said to have been eaten by the natives in times of scarcity, but it is a food that could hardly with truth be called either nutritious or palatable, and the name "Kafir Bread" which has been applied to the plants is somewhat misleading. The genus *Stangeria* is peculiar to South Africa, and is named in honour of the late Dr. Stanger, one of the earliest to hold the office of Surveyor General in the Colony.

Number of species about 75.

(Ex. KAFIR BREAD.)

Pinnæ of leaves longitudinally many veined.
Pinnæ of leaves mid-ribbed with forked veins.

ENCEPHALARTOS.
STANGERIA.

LIST OF SPECIES.

1 <i>Encephalartos</i> , <i>Lehm.</i>	longifolius, <i>Lehm.</i>	?
<i>Altensteinii</i> , <i>Lehm.</i>	B.	villosus, <i>Lehm.</i>
<i>brachyphyllus</i> , <i>Lehm.</i>	Z.	
<i>caffer</i> , <i>Miq.</i>	BC	2 <i>Stangeria</i> , <i>T. Moore.</i>
<i>Ghellenckii</i> , <i>Lehm.</i>	A-E.	paradoxa, <i>Moore.</i>
<i>Lehmanii</i> , <i>Lehm.</i>	?	AB.

MONOCOTYLEDONS.

ORDER CLXIX. ORCHIDÆ.

But few members of this family have any useful properties, but the beauty of the flowers of very many species, delicious fragrance, and gorgeous colouring of others has made them great favourites in cultivation, the epiphytal and tropical ones especially so. Of the few having an economic value, the species of *Vanilla* are the best known, the fruit capsules are carefully dried, and valued for their delicious perfume. *Angræcum fragrans* is a native of Mauritius and Bourbon, its leaves are strongly scented and have been used medicinally and for scenting tea. *Salep* consists of the tubers of several species of Orchids, natives of Europe and Asia Minor; these tubers contain a large quantity of starch and were formerly used medicinally; a decoction of them properly prepared is said to be "one of the best articles of diet a convalescent can use." None of our indigenous species are of much value; the epiphytal ones are usually small flowered, and their flowers white or yellow; some of the terrestrial ones bear handsome flowers, but their cultivation is difficult.

Number of species nearly 5000.

KEY TO TRIBES.

Anther lid-like, cells distinct. Pollinia waxy, usually without caudicle or gland.

Anther lid-like, cells usually confluent. Pollinia waxy mostly attached to a glandular appendage of the rostellum.

Anther without lid, cells distinct. Pollen granular.

Anther without lid, cells distinct. Pollen granular, the pollinia terminating in a true caudicle.

I EPIDENDREÆ.

II VANDÆ.

III NEOTTIEÆ.

IV OPHRYDEÆ.

KEY TO GENERA.

I. EPIDENDREÆ.

Pollinia 4. Leaves expanded, pseudobulbs small.

Pollinia 4. Leaves small, at apex of pseudobulbs.

Pollinia 8. Leaves broad, plaited.

LIPARIS.

BULBOPHYLLUM.

CALANTHE.

II. VANDEÆ.

Labellum spurred.	1
Labellum without a spur.	2
1 Spur short or saccate.	3
1 Spur long, filiform or cylindrical.	3
2 Epiphytal. Stems elongated.	4
2 Epiphytal. Psendobulbs tuberiform.	
3 Sepals and petals subequal, free. Scapes usually leafless.	
4 Pollinia flat, on a single stipe.	
4 Pollinia filiform on two stipes, quite distinct or united only by the glands.	

III. NEOTTIEÆ.

An erect herb. Leaves narrow, sessile.
A decumbent herb. Leaves ovate, acute, petiolate.

ZEUXINE.
PLATYLEPIS.

IV. OPHRYIDEÆ.

KEY TO SUBTRIBES.

Anthers erect. Glands of the pollinia nude or more rarely half included in the channelled or inflexed lobes of the rostellum.

A. HABENARIEÆ.

Anthers reclined, or reflexed on the back of the column, more rarely sub-erect. Stigma large, pseudo terminal, or distant from the anther and sub-adnate to the lip.

B. DISEÆ.

Odd sepal posticus, more rarely anticus, cohering with the petals into a single galeate, fornicate or explanate piece. Lip adnate to the face of the column, usually produced above the junction into a variously shaped appendage. Cells of the anther usually distant, less commonly (in *Disperis* only) approximate. Stigma bilobed or bipartite, the lobes separated by the intervening adnate lip; or stamens 5, distant.

C. CORYCIEÆ.

A. HABENARIEÆ.

KEY TO GENERA.

Labellum spurless. Leaves clustered at base.
Labellum spurless. Cauline leaves present.
Central lobe of rostellum narrow or obsolete.
Central lobe of rostellum ample, erect.

STENOGLOTTIS.
HERMINIUM.

1 Petals long clawed, lamina, fimbriate, many leaved.
1 Petals longer than sepals, erect, spike secund.
1 Petals equalling sepals. Flowers spicate or racemose.
 2 Central lobe of rostellum complicate. Leaves few or radical.

1
2

HUTTONIA.
HOLOTHRIX.
HABENARIA.

CYNORCHIS

B. DISEÆ.

Labellum posticus, erect, concave, 2-spurred or 2-gibbous.	SATYRIUM.
Back sepal spurred or concave.	DISA.
Labellum with a single spur.	SCHIZOCHLILUS.
Spur none. Stems few leaved. Racemes few flowered.	BROWNLEEA.
Spur none Stems many leaved. Spikes many flowered.	BRACHYCORYTHIS.

C. CORYCIEÆ.

Lateral sepals free, flat.	PTERYGODIUM.
Lateral sepals free, spurred or saccate.	DISPERIS.
Lateral sepals connate nearly to apex.	CORYCIUM.

LIST OF SPECIES.

1 <i>Liparis, L. C. Rich.</i>			
Bowkeri, <i>Harv.</i>	C.	Krebsii, <i>Bolus.</i>	BC.
Gerrardi, <i>Reichb.</i>	?	laxiflora, <i>Schltr.</i>	B.
2 <i>Bulbophyllum, Thouars.</i>		leontoglossa, <i>Reichb.</i>	A-B,
Sondersoni, <i>Reichb. f.</i>	A-C Z.	maculata, <i>Reichb. f.</i>	?
3 <i>Calanthe, R. Br.</i>		natalensis, <i>Reichb.</i>	A.
natalensis, <i>Reichb. f.</i>	A-C Z.	nigricans, <i>Schltr.</i>	A.
4 <i>Eulophia, R. Br.</i>		Oliveriana, <i>Bolus.</i>	CF.
æqualis, <i>Bolus.</i>	A-B.	parvilabris, <i>Ldl.</i>	?
æmula, <i>Schltr.</i>	D.	porphyroglossa, <i>Bolus.</i>	A-B.
aculeata, <i>Spreng.</i>	B.	Reichenbachiana, <i>Bolus.</i>	B.
arenaria, <i>Bolus.</i>	AB.	speciosa, <i>Bolus.</i>	AB.
barbata, <i>Spreng.</i>	AA.	streptopetala, <i>Ldl.</i>	B.
bicolor, <i>Reichb.</i>	B.	tristis, <i>Spreng.</i>	?
Buchananii, <i>Bolus.</i>	B.	Woodii, <i>Schltr.</i>	E.
caffra, <i>Reichb.</i>	D.	5 <i>Ansellia, Ldl.</i>	
capensis, (<i>Linn</i>) <i>Bolus.</i>	?	gigantea, <i>Reichb. f.</i>	A-B.
carunculifera, <i>Reichb.</i>	?	„ var. <i>citrina, Reichb. f.</i>	A
calanthoides, <i>Schltr.</i>	CD.	6 <i>Polystachya, Hooker.</i>	
clavicornis, <i>Ldl.</i>	A-B.	Gerrardi, <i>Harv.</i>	D.
chrysantha, <i>Schltr.</i>	A-C.	grandiflora, <i>Ldl.</i>	?
clitellifer, <i>Bolus.</i>	AB.	Ottoniana, <i>Reichb. f.</i>	A.
deflexa, <i>Rolfe.</i>	?	pubescens, „	B.
Dregeana, <i>Lindl.</i>	B-D.	rigidula, „	?
flaccida, <i>Schlechter.</i>	A	Sandersoni, <i>Harv.</i>	A.
ensata, <i>Ldl.</i>	AB.	similis, <i>Reichb. f.</i>	?
hians, <i>Spreng.</i>	B.	tricuris, „	?
inæqualis, <i>Schltr.</i>	C.	7 <i>Angræcum, Thouars.</i>	
		arcuatum, <i>Ldl.</i>	A-B.
		bicaudatum, <i>Ldl.</i>	B.

Angraecum, <i>Continued.</i>			
caffrum, <i>Bolus.</i>	?	ciliosa, <i>Ldl.</i>	?
Culveri, <i>Schltr.</i>	Z.	cornuta, „	A.
Chiloschistæ, <i>Reichb. f.</i>	Z.	clavata, <i>Reichb. f.</i>	B.
conchiferum, <i>Ldl.</i>	?	dives, „	B.
Gerrardi, <i>Bolus.</i>	B.	Dregeana, <i>Ldl.</i>	AB.
Maudæe,	Z.	foliosa, <i>Reichb. f.</i>	A-D.
mystacidi, <i>Reichb. f.</i>	?	Gerrardi, „	?
sacciferum, <i>Ldl.</i>	E	involuta, <i>Bolus.</i>	A.
Saundersiæ, <i>Bolus.</i>	A.	Kranzliniana, <i>Schltr.</i>	D.
tricuspe, „	?	malacophylla, <i>Reichb.</i>	E.
tridentatum, <i>Harv.</i>	B.	mierorrynecum, <i>Schltr.</i>	F.
8 Mystacidium , <i>Ldl.</i>		natalensis, <i>Reichb. f.</i>	A-E.
filicorne, <i>Ldl.</i>	B.	parvula, <i>Harv.</i>	?
gracile, <i>Harv.</i>	A.	polyphylla, <i>Kzl.</i>	?
longicorne, (<i>Thb.</i>) <i>Nob.</i>	?	polypodantha, <i>R. S.</i>	?
Millari, <i>Bolus.</i>	A.	orrecta, <i>Bolus.</i>	
pusillum, <i>Harv.</i>	B.	Saundersiae, <i>Harv.</i>	A.
9 Zeuxine , <i>Ldl.</i>		tenuior, <i>N. E. Brown.</i>	B.
cochlearis, <i>Schltr.</i>	A.	tetrapetala, <i>Reichb. f.</i>	A-D.
10 Platylepis , <i>A. Rich.</i>		transvaalensis, <i>Schltr.</i>	
glandulosa, <i>Reichb. f.</i>	A.	tridens, <i>Ldl.</i>	?
11 Herminium , <i>Linnaeus.</i>		Tysoni, <i>Bolus.</i>	B.
natalense, <i>Reichb. f.</i>	E.	Woodiana, <i>Schltr.</i>	Z
12 Stenoglottis , <i>Ldl.</i>		sp. (<i>Platanthera virginialis</i> , <i>Bolus</i>)	E.
fimbriata, <i>Ldl.</i>	B-D.	16 Cynorkis , <i>Thouars.</i>	
longifolia, <i>Hk. f.</i>	Z.	compacta, <i>Reichb. f.</i>	B.
13 Huttonæa , <i>Harv.</i>		17 Satyrium , <i>Swartz.</i>	
fimbriata, <i>Reichb. f.</i>	D.	aphyllum, <i>Schltr.</i>	B.
grandiflora, <i>Schltr.</i>	E.	Atherstonei, <i>Reichb. f.</i>	A-D.
oreophila, „	F.	cordifolium, <i>Ldl.</i>	D.
pelchra, <i>Harv.</i>	B.	cristatum, <i>Sond.</i>	E.
14 Holothrix , <i>L. C. Rieh.</i>		erectum, <i>Thb.</i>	?
Lindleyana, <i>Reichb. f.</i>	?	eriostomum, <i>Ldl.</i>	A-C.
Macowaniana, ..	?	longicauda, „	B.
multisecta, <i>Bolus.</i>	?	macrophyllum, <i>Ldl.</i>	B.
orthoceras, <i>Reichb. f.</i>	B.	ocellatum, <i>Bolus.</i>	D.
15 Habenaria , <i>Willd.</i>		parviflorum, <i>Sw.</i>	B.
arenaria, <i>Ldl.</i>	C.	sphærocarpum, <i>Ldl.</i>	A-B.
Boltoni, <i>Harv.</i>	A.	Woodii, <i>Schltr.</i>	A-C.
Bonatea, <i>Reichb. f.</i>	A-C.	18 Disa , <i>Berg.</i>	
cassidea. „	?	aconitoides, <i>Sond.</i>	B.
		Baurii, <i>Bolus.</i>	Z.
		brevicornis, <i>Bolus.</i>	F.
		cephalotes, <i>Reichb. f.</i>	E.
		chrysostachya, <i>Sw.</i>	B-C.

Disa. *Continued.*

Cooperi, <i>Reichb.</i>	C.
crassicornis, <i>Ldl.</i>	B.
extinctoria, <i>Rchb.</i>	B.
frigida, <i>Schltr.</i>	F.
læta, <i>Reichb. f.</i>	?
Macowani, <i>Reichb. f.</i>	D.
nervosa, <i>Ldl.</i>	B.
oreophila, <i>Bolus.</i>	E.
patula, <i>Sond.</i>	D.
polygonoides, <i>Ldl.</i>	A-E.
pulchra, <i>Sond.</i>	F.
sagittalis, <i>Sw.</i>	?
saxicola, <i>Schltr.</i>	F.
stachyoides, <i>Reichb. f.</i>	B-F.
stenoglossa, <i>Bolus.</i>	?
stricta, <i>Sond.</i>	?
tripetaloides, <i>N. E. Brown.</i>	BC.
versicolor, <i>Rchb. f.</i>	E.

19 Brownleea, <i>Ldl.</i>	
cœrulea, <i>Harv.</i>	B.
Galpini, <i>Bolus.</i>	?
monophylla, <i>Schltr.</i>	F.
parviflora, <i>Harv.</i>	F.
recurvata, <i>Sond.</i>	?

20 Brachycorythis, <i>Ldl.</i>	
ovata, <i>Harv.</i>	A.B.
pubescens, <i>Harv.</i>	BC.

21 Schizochilus, *Sond.*

Gerrardi, <i>Bolus.</i>	E.
Zeyheri, <i>Sond.</i>	B-E.
?	?
22 Pterygodium, <i>Sw.</i>	?
hastatum, <i>Bolus.</i>	B-E.
magnum, <i>Reichb.</i>	EF.
sp. (<i>Govt. Herb.</i> 7169)	

23 Disperis, *Sw.*

anthoceros, <i>Reichb. f.</i>	BC.
cardiophora, <i>Harv.</i>	B.
Cooperi, "	D.
Fanniniaæ, "	DE.
Macowani, <i>Bolus.</i>	?
oxyglossa, "	B.
stenoglossa, <i>Schltr.</i>	A.
Tysoni, <i>Bolus</i>	F.
Wealii, <i>Reichb.</i>	?
Woodii, <i>Bolus.</i>	A-C.
venusta, "	E.

24 Corycium, *Sw.*

nigrescens, <i>Sond</i>	A-E.
tricuspidatum, <i>Bolus.</i>	EF.

ORDER CLXX. SCITAMINEÆ.

With this Order are now incorporated the Order *Zingiberaceæ*, *Marantaceæ*, and *Musaceæ*, which are considered to be tribes of Scitamineæ; the first includes the plants yielding Ginger, Turmeric, and Cardamoms, the second those yielding Arrowroot, and the third the Bananas. The well known Cannas forming a separate tribe (*Cannæ*),—the Order also contains many ornamental plants, but it is not largely represented in Natal.

Number of species about 450.

(EX. INDUNGULU).

Stamen 1. Perianth tubular or spathaceous. Low herbs.

KÆMPFERIA.

Stamens 5. Perianth segments free. Tall banana-like plants "Wild Banana."

STRELITZIA.

LIST OF SPECIES.

1 <i>Kaempferia</i> , <i>Linn.</i>	2 <i>Strelitzia</i> , <i>Ait.</i>
<i>natalensis</i> , <i>Schltr.</i>	<i>B.</i> <i>Augusta</i> , <i>Thb.</i>

AB.

ORDER CLXXII. HÆMODORACEÆ.

A small family, two genera of which are found in Natal, one of which is represented by a single species only. The only genus of the Order having any economic value is *Sansevieria*, whose leaves yield the "Bowstring Hemp" of commerce which is being cultivated commercially in several parts of the world. We have but two species of this genus indigenous to the Colony, but another one (*S. sulcata*) is found in the Transvaal.

Number of species 120.

Stamens 3. Perianth tube wanting.	BARBARETTA.
Stamens 6. Perianth tube long, slender.	SANSEVIERA.

LIST OF SPECIES.

1 <i>Barbaretta</i> , <i>Harv.</i>	2 <i>Sansevieria</i> , <i>Thb.</i>
<i>aurea</i> , <i>Harv.</i>	<i>C.</i> <i>thyrsiflora</i> , <i>Thb.</i>

AB.

sp. Z.

ORDER CLXXIII. IRIDEÆ.

A family which is well represented in South Africa, some of the genera being quite confined to it. The tubers or rhizomes of many of the species of *Iris* have been, and perhaps still are used medicinally, those of *I. florentina* are known as Orris root. The stigmas of *Crocus sativa* are dried and used as a yellow dye, and also medicinally, they form the "Saffron" of commerce. Many of our indigenous species of the Order bear handsome flowers, more especially those of *Gladiclus*, *Watsonia* and *Tritonia*, while the tubers of some species of *Moræa* are said to be poisonous, and the leaves are called by the Dutch and Colonists "Tulp" or "Tulip," and are certainly deleterious to cattle.

Number of species more than 700.

KEY TO SUBORDERS.

Inflorescence corymbose, flowers comparatively fugitive, generally more than 1 to a spathe. Stamens opposite to the style-branches, and adpressed to them.

A MOREÆ.

Inflorescence corymbose. Stamens alternate with the style-branches.

B. SISYRINCHIEÆ.

Inflorescence spicate. Flowers not fugitive, solitary, each subtended by a pair of spathe valves.

C IXIEÆ.

KEY TO GENERA.

A. MOREÆ.

Style branches large and petaloid, transversely stig-matose at the base of the large crests.

MOREÆ.

Style branches petaloid, with two small divergent crests, papillose round their edges.

HOMERIA.

B. SISYRINCHIEÆ.

Spathes 1-flowered, peduncled.

ROMULEA.

Spathes usually more than 1-flowered.

1

1 Style branches long, subulate. Flowers pale yellow.

BOBARTIA.

1 Style branches short. Flowers blue.

ARISTEA.

C. IXIEÆ.

Style branches simple. Flowers regular. Stamens equilateral.

1

Style branches bifid. Stamens unilateral.

2

Style branches simple. Stamens unilateral, arcuate.

3

1 Rootstock not tuberous.

SCHIZOSTYLLIS.

4

1 Rootstock a corm

4 Style short, branches long, subulate. Spatha valves green.

HESPERANTHA.

4 Style long, branches short, clavate. Spatha valves membranous, entire. Leaves long, rigid.

DIERAMA.

4 Style long, branches short, subulate. Outer spatha valve short, brown, emarginate.

IXIA.

2 Perianth tube slender. Stamens in throat.

LAPEYROUSIA.

2 Perianth tube widened in the middle, where stamens are inserted.

WATSONIA.

5

3 Perianth subregular.

TRITONIA.

3 Perianth irregular.

CROCOSMIA.

5 Tube short, cylindrical. Spatha valves small. Capsule oblong.

ACIDANTHERA.

5 Tube short, cylindrical. Spatha valves small. Capsule inflated.

GLADIOLUS.

5 Tube long, cylindrical. Spatha valves long, green.

ANTHOLYZA.

6 Tube funnel-shaped. Spatha valves large, green, lanceolate.

1

6 Tube dilated at the middle. Spatha valves oblong-lanceolate.

LIST OF SPECIES.

1 *Moræa*, Linn.

E.

glauca, Wood & Evans.

CD.

iridioides, Linn.

B.

natalensis, Baker.

D.

D. *spathacea*, Ker.

B. *tenuis*, Ker.

C. *tricuspidis*, Ker.

D. *violacea*, Baker.

2 <i>Homeria</i> , <i>Vent.</i>		11 <i>Watsonia</i> , <i>Miller.</i>	
miniata, <i>Sweet.</i>		densiflora, <i>Baker.</i>	A-D.
3 <i>Romulea</i> , <i>Maratti.</i>		var. <i>alba</i> .	AB.
rosea, <i>Eckl.</i>	E.	humilis, <i>Miller.</i>	?
4 <i>Bobartia</i> , <i>Ker.</i>		Meriana, „	C-E.
natalensis, (<i>Regel</i>) <i>Klatt.</i>	?		
5 <i>Aristea</i> , <i>Soland.</i>		12 <i>Tritonia</i> , <i>Ker.</i>	
anceps, <i>Eckl.</i>	AB.	Kraussii, <i>Baker.</i>	BC.
compressa, <i>Buching.</i>	AB.	laxiflora, <i>Bth.</i>	B.
Eckloni, <i>Baker.</i>	B.	lineata, <i>Ker.</i>	AB.
flexicaulis, „	C.	Pottsii, <i>Bth.</i>	BC.
majubensis, „	EF.	rosea, <i>Klatt.</i>	?
montana, „	F.	teretifolia, <i>Baker.</i>	BC.
paniculata, „	F.		
schizolæna, <i>Harv.</i>	B.	13 <i>Crocosmia</i> , <i>Planch.</i>	
torulosa, <i>Klatt.</i>	AB.	aurea, <i>Planch.</i>	AB.
„ var. <i>monostachya</i> , <i>Baker.</i>	?		
6 <i>Schizostylis</i> , <i>Backh & Harv.</i>		14 <i>Acidanthera</i> , <i>Hochst.</i>	
coccinea, <i>Backh & Harv.</i>	D-F.	brevicollis, <i>Baker.</i>	A.
pauciflora, <i>Klatt.</i>	D.	platypetala, „	A-E.
7 <i>Hesperantha</i> , <i>Ker.</i>		15 <i>Gladiolus</i> , <i>Linn.</i>	
Baurii, <i>Baker.</i>	BC.	aurantiacus, <i>Klatt.</i>	B.
bifolia, „	CD.	crassifolius, <i>Baker.</i>	CD.
gracilis, „	B.	cruentus, <i>Moore.</i>	?
lactea, „	AB.	dracocephalus, <i>Hk. f.</i>	E.
modesta, „	B.	Eckloni, <i>Lehm.</i>	DE.
radiata, <i>Ker.</i>	D.	edulis, <i>Burch.</i>	DE.
subexserta, <i>Baker.</i>	B.	gracilis, <i>Jacq.</i>	?
Woodii, <i>Baker.</i>	CD.	inandensis, <i>Baker.</i>	BC.
8 <i>Ixia</i> , <i>Linn.</i>		Junodi, <i>Baker.</i>	D.
trichorhiza, <i>Baker.</i>	A.	Ludwigii, <i>Pappe.</i>	BD.
9 <i>Dierama</i> , <i>K. Koch.</i>		Papilio, <i>Hook.</i>	A-D.
pendula, <i>Baker.</i>	A-E.	platyphyllus, <i>Baker.</i>	B.
„ var. <i>pumila</i> , <i>Baker.</i>	AB.	psittacinus, <i>Hook.</i>	AB.
pulcherrima, <i>Baker.</i>	CD.	„ var. <i>Cooperi</i> .	Z.
10 <i>Lapeyrousea</i> , <i>Pourr.</i>		pubescens, <i>Baker.</i>	D.
cruenta, <i>Baker.</i>	A-B.	purpureo-auratus, <i>Hk.</i>	E.
		rachidiflorus, <i>Klatt.</i>	A.
		salmoneus, <i>Baker.</i>	CD.
		sericeo-villosus, <i>Hook.</i>	E.
		Saundersii, <i>Hk. f.</i>	B.
		tritonceiformis, <i>O. Kuntze.</i>	?
		Woodii, <i>Baker.</i>	BC.
		16 <i>Antholyza</i> , <i>Linn.</i>	
		caffra, <i>Ker.</i>	D.
		paniculata, <i>Klatt.</i>	C-E.

ORDER CLXXIV. AMARYLLIDEÆ.

An Order containing a very large proportion of ornamental plants, some of which, such as the species of *Crinum*, *Clivia*, and *Hæmanthus* amongst African genera, and *Narcissus*, *Pancratium*, *Bomarea*, and others amongst foreign genera are very showy, while the Snowdrop (*Galanthus nivalis*) and the Snowflake (*Leucojum vernum*) are more admired for the gracefulness of their flowers, and the latter for its scent also. Both are natives of northern climates. Some species of the family have the reputation of being poisonous, but it is quite possible that their deleterious properties have in some cases been exaggerated. The well-known "American Aloe" belongs to this Order, and is not an Aloe, its correct name being *Agave americana*; its leaves yield a very strong fibre, and the Mexicans obtain from its sap a liquid, which, when fermented is known as "Pulque," and is very intoxicating. What is known locally as "Mauritius Hemp," is obtained from one or more species of *Furcraea*, plants which are also incorrectly called Aloes; these plants are also natives of South America, but are being largely cultivated in many parts of the world.

Number of species about 650.

KEY TO TRIBES.

Rootstock a tunicated corm. Spathe not present.

Flowers usually yellow, hairy outside.

A. HYPOXIDEÆ.

Rootstock a tunicated bulb. Flowers usually in an umbel subtended by a spathe, never hairy outside.

B. AMARYLLEÆ.

Rootstock not bulbous. Flowers solitary, more or less glandular outside.

C. VELLOZIEÆ.

KEY TO GENERA.

A. HYPOXIDEÆ.

Stamens 6. Perianth with a tube. Fruit indehiscent.

CURCULIGO.

Stamens 6. Perianth without a tube. Fruit a capsule with circumscissile dehiscence.

HYPOXIS.

B. AMARYLLEÆ.

Anthers basifixed.

1

Anthers dorsifixed, versatile.

2

1 Flowers umbellate. Anthers oblong, sagittate. Perianth with a short tube.

ANOIGANTHUS.

1 Flowers umbellate. Anthers small, globose. Perianth cut down nearly to base.

HESSEA.

1 Flowers solitary. Anthers linear.

APODOLIRION.

2 Fruit indehiscent, or bursting irregularly, seeds 1, or few, bulbiform.

3

2 Fruit a 3-valved capsule. Seeds many, compressed.

4

2 Fruit baccate or capsular. Ovules 2, or few, clustered at the middle of the placenta.

6

3 Segments of perianth broad. Stamens declinate.	CRINUM.
3 Segments of perianth narrow. Stamens erect.	AMMOCHARIS.
4 Perianth with a tube longer than the limb.	CYRTANTHUS.
4 Perianth cut down to the ovary.	5
5 Capsule turbinate, acutely angled. Ovules numerous.	BRUNSVIGIA.
5 Capsule globose, obtusely angled. Ovules few in cells.	NERINE.
6. Bulb imperfect. Spatha valves several. Ovules 5-6 in each cell	CLIVIA.
6 Bulb large, tunicated. Spatha valves several. Ovules solitary or in collateral pairs.	HÆMANTHUS.
6 Fruit capsular. Spatha valves 2.	BUPHANE.

C. VELLOZIEÆ.

Perianth cut down to the ovary. Stamens 6. The only genus.

VELLOZIA.

LIST OF SPECIES.

1 <i>Hypoxis</i> , <i>Linn.</i>	4 <i>Hessea</i> , <i>Herb.</i>
acuminata, <i>Baker.</i>	B. Schlechteri, <i>O. Kuntze.</i> DE.
angustifolia, <i>Lam.</i>	? 5 <i>Apodolirion</i> , <i>Baker.</i>
var. <i>Buchanani</i> , <i>Baker.</i>	B. Buchanani, <i>Baker.</i> C.
argentea, <i>Harv.</i>	AB. Ettæ, <i>Baker.</i> B.
Baurii, <i>Baker.</i>	E. McKenii, <i>Baker.</i> C.
brevifolia, <i>Baker.</i>	
filiformis, „	A-E. 6 <i>Crinum</i> , <i>Linn.</i>
Gerrardi, „	B. acaule, <i>Baker.</i> Z.
Junodii, „	B. longifolium, <i>Thb.</i> A-C.
Kraussiana, <i>Burch</i>	C. Macowani, <i>Baker.</i> D-E.
latifolia, <i>Hook.</i>	DF. Moorei, <i>Hk. f.</i> BC.
membranacea, <i>Baker.</i>	B.
millioides, <i>Baker.</i>	D.
multiceps, <i>Buch.</i>	B-E.
obtusa, <i>Burch.</i>	F.
oligotricha, <i>Baker.</i>	A.
rigidula, <i>Baker.</i>	B.
var. <i>pilosissima</i> , <i>Baker.</i>	E.
Rooperi, <i>Moore.</i>	B-D.
villosa, <i>Linn.</i>	B-F.
Woodii, <i>Baker.</i>	B.
2 <i>Cureuligo</i> , <i>Gaertn.</i>	
plicata, <i>Dryander.</i>	?
var. <i>Barberieæ</i> , <i>Baker.</i>	B-E.
3 <i>Anoiganthus</i> , <i>Baker.</i>	
breviflorus, <i>Baker.</i>	B-C.
luteus, <i>Baker.</i>	A-B.
	9 <i>Nerine</i> , <i>Herb.</i>
	angustifolia, <i>Baker.</i> C-E.
	appendiculata, „ DE.
	filifolia, „ ?
	pancratioides, „ D-F.
	Schlechteri, „ F.
	10 <i>Cyrtanthus</i> , <i>Aiton.</i>
	angustifolius, <i>Ait.</i> A-F.
	Galpini, <i>Baker.</i> E.
	lutescens, <i>Herb.</i> E.

Cyrtanthus, <i>Continued.</i>			
McKenii, <i>Hook.</i>	A.	deformis, <i>Hook.</i>	E.
obliquus, <i>Ait.</i>	BC.	hirsutus, <i>Baker.</i>	CD.
O'Brieni, <i>Baker.</i>	EF.	Katherinæ, „	AB.
odorus, <i>Gawl.</i>	BC.	magnificus, <i>Herb.</i>	?
sanguineus, <i>Hook.</i>	A.B.	McKenii, <i>Baker.</i>	?
11 Olivia, <i>Ldl.</i>		montanus, „	EF.
Gardneri, <i>Hook.</i>	AB Z.	natalensis, <i>Pappe.</i>	AB.
miniata, <i>Regel.</i>	AB.	puniceus, <i>Linn.</i>	AB.
nobilis, <i>Ldl.</i>	BC.		
12 Hæmanthus, <i>Linn.</i>			
albomaculatus, <i>Baker.</i>	A.	13 Buphane, <i>Herbert.</i>	
Baurii, <i>Baker.</i>	B.	disticha, <i>Herb.</i>	AB.
candidus, <i>Bull.</i>	E.		
		14 Vellozia, <i>Vand.</i>	
		clavata, <i>Baker.</i>	?
		elegans, <i>Oliver.</i>	B-D.
		viscosa, <i>Baker.</i>	EF.

ORDER CLXXVI. DIOSCORACEÆ.

A small family containing 8 genera only, two of which are represented in Natal; the genus *Testudinaria* being peculiar to South Africa. The tubers of several species of *Dioscorea* are the "Yams," so much used as articles of food in most tropical countries. None of our indigenous species have any economic value. The rootstock or tuber of *Testudinaria sylvatica* which lies on the surface of the ground is in good specimens singularly like a Tortoise.

Number of species less than 200.

Tuber fleshy, subterranean. Seeds winged all round, or at base only.

DIOSCOREA.

Tuber on surface of ground. Seeds winged at apex only.

TESTUDINARIA.

LIST OF SPECIES.

1 <i>Dioscorea</i> , <i>Linn.</i>			
crinita, <i>Hk. f.</i>	A.B.	rupicola, <i>Kth.</i>	B.
diversifolia, <i>Griesb.</i>	B.	undatiloba, <i>Baker.</i>	?
dregeana, <i>Baker.</i>	A-B.		
malifolia, „	AB.	2 <i>Testudinaria</i> , <i>Salisb.</i>	
microcuspis, „	D.	elephantipes, <i>Burch.</i>	DE.
multiloba, <i>Kth.</i>	B.	sylvatica, <i>Kth.</i>	AB.

ORDER CLXXVIII. LILIACEÆ.

A large family including Smilaceæ and Melanthiaceæ which in Harvey's Genera of South African Plants form distinct Orders. Many species of the Order are remarkable for the beauty of their flowers, and others for the properties they possess. Amongst the former, the Tulips and Lillies probably stand foremost, but the Hyacinth,

Tuberose, Agapanthus, Kniphofia, Fritillaria and others are highly esteemed as ornamental flowering plants. The bulbs of Tulipa, Scilla and of some other genera have been used medicinally, but are now little esteemed. The leaves of *Phormium tenax* the "New Zealand Flax" yield a fibre which is used for cordage and other purposes. The drug known as Aloes is extracted from several species of Aloe, that yielded by a species growing in the island of Socotra being considered the best, the species principally used for this purpose in Natal is *Aloe ferox*, though probably other species have been used, though not in quantity. Several species of Allium are used in cookery, such as the following: Onion, Eschalot, Leek, Garlic, Chives and others. Sarsaparilla is the root of several species of Smilax, and these roots are sent to Europe in large quantities from South America, but we are not aware whether our only indigenous species of the genus has been tested for its medicinal properties. Many of our native species of the Order are very ornamental, and though the individual flowers are not large, the large number of them on each stem in some measure compensates for their smaller size; the flowers on one spike of some of the Kniphofias, for instance are very numerous, those of *K. multiflora* reaching to 3-400 or perhaps more on a single spike. Several of our native species of Asparagus are in cultivation in Europe, and are highly esteemed, *A. plumosus nanus* being known everywhere, while *A. virgatus* has been cultivated as a culinary vegetable.

KEY TO SERIES.

Fruit baccate. Anthers dehiscing introrsely.	A. ASPARAGACEÆ.
Fruit a loculicidal capsule. Anthers dehiscing introrsely.	B. LILIACEÆ VERÆ.
Fruit capsular. Anthers dehiscing extrorsely.	C. COLCHICACEÆ.

KEY TO GENERA.

A. ASPARAGACEÆ.

Stems climbing. Leaves reticulate. Flowers diœcious.	SMILAX.
Stems climbing or erect. Leaves small and bract-like. Flowers hermaphrodite.	ASPARAGUS.
Stems climbing. Leaves reticulate, veins conspicuous. Flowers cymose.	BEHANIA.
Stems erect. Veins inconspicuous. Flowers racemose or panicled.	DRACÉNA.

B. LILIACEÆ VERÆ.

KEY TO TRIBES.

Rootstock not bulbous. Leaves not fleshy. Inflorescence racemose. Perianth segments united in a tube at base.	HEMEROCALLEÆ.
Rootstock not bulbous. Leaves thick, fleshy, toothed. Inflorescence racemose. Perianth segments united in a tube at the base.	ALOINEÆ.

Leaves linear or ensiform, entire, not thick and fleshy.
Inflorescence racemose. Perianth cut down to the base.

Flowers umbellate, umbels subtended by 1-2 membranous bracts. Perianth gamophyllous.

Rootstock bulbous. Peduncle naked. Inflorescence racemose or spicate not subtended by a common spathe.

ASPHODELEÆ.

ALLIEÆ.

SCILLEÆ.

KEY TO GENERA.

HEMEROCALEÆ.

Perianth cylindrical.

KNIPHOFIA.

Perianth short, campanulate.

NOTOSCEPTRUM.

ALOINEÆ.

Perianth with a ventricose tube and short segments.

GASTERIA.

Perianth cylindrical, with a short tube and long connivent segments.

ALOE.

ASPHODELEÆ.

Anthers dorsifixed, versatile.

1

Anthers basifixed, erect.

2

1 Rootstock not bulbous. Filaments glabrous.
Ovules 2 in each cell.

BULBINELLA.

1 Rootstock not bulbous. Filaments bearded.
Ovules more than 2 in each cell.

BULBINE.

1 Rootstock bulbous. Stems climbing. Seeds naked.

BOWEIA.

1 Rootstock bulbous. Leaves radical. Seeds naked.

SCHIZOBASIS.

1 Rootstock tuberous. Stems erect. Seeds woolly.

ERIOSPERMUM.

2 Capsule obtusely angled. Seeds triquetrous.

ANTHERICUM.

2 Capsule acutely angled. Seeds flattened.

CHLOROPHYTUM.

ALLIEÆ.

Perianth tube short. Corona none.

AGAPANTHUS.

Perianth tube oblong-cylindrical. Corona annular or of 6 distinct scales.

TULBAGHIA.

SCILLEÆ.

Perianth gamophyllous. Seeds crowded, angled or discoid.

1

Perianth polyphyllous. Seeds crowded, angled or discoid.

2

Perianth polyphyllous. Seeds not crowded, angled or discoid.

3

1 Perianth tube campanulate, segments linear, reflexing.

DRIMIA.

- 1 Perianth tube oblong, segments of two kinds, outer caudate.
- 1 Perianth tube oblong, segments subequal, spreading.
- 2 Inner perianth segments conniving.
- 2 Perianth segments all spreading.
- 3 Perianth segments cucullate, connivent.
- 3 Perianth segments flat, spreading. Raceme with crown of empty bracts at apex.
- 3 Perianth segments spreading, 1-nerved. Racemes not comose. Flowers blue, or mauve-purple.
- 3 Perianth segments spreading, keeled with more than one nerve. Flowers usually white or yellow, never blue.

DIPCADI.

GALTONIA.

ALBUCA.

URGINEA.

DRIMIOPSIS.

EUCOMIS.

SCILLA.

ORNITHOGALUM.

COLCHICACEÆ.

Rootstock a bulb or corn.

1

Rootstock not bulbous.

2

- 1 Peduncle short. Inflorescence capitate. Perianth segments distinct.
- 1 Peduncle long. Inflorescence spicate. Perianth segments united at base.
- 2 Stems climbing. Perianth segments free, clawed, spreading.
- 2 Stems climbing. Perianth segments free, connivent, not clawed.
- 2 Stems erect. Perianth gamophyllous, segments short.

ANDROCYMBIUM.

WURMBEA.

GLORIOSA.

LITTONIA.

SANDERSONIA.

LIST OF SPECIES.

1 <i>Smilax</i> , Linn.		tenuifolius, <i>Hk. f.</i>	A.
<i>Kraussiana</i> , Meisn.	A-C.	virgatus, <i>Baker.</i>	A-E.
2 <i>Asparagus</i> , Linn.		3 <i>Behnia</i> , <i>Didrichs.</i>	
<i>aethiopicus</i> , Linn.	B	reticulata, <i>Didrichs.</i>	A-C.
<i>africanus</i> , Lam.	A-D.	4 <i>Dracæna</i> , <i>Vand.</i>	
<i>asiaticus</i> , Linn.	?	<i>Hookeriana</i> , <i>K. Koch.</i>	A.B.
<i>declinatus</i> , "	?	5 <i>Kniphofia</i> , <i>Moench.</i>	
<i>falcatus</i> , "	AB	aloides, <i>Moench.</i>	A-C.
<i>medeoloides</i> , <i>Thb.</i>	A-C.	breviflora, <i>Harv.</i>	D-F.
<i>myriocladus</i> , <i>Baker.</i>	B-D.	Buchananii, <i>Baker.</i>	B-D.
<i>plumosus</i> , <i>Baker.</i>	AB.	concinna, "	D.
var. <i>nanus</i> .	A.	ensifolia, "	EF.
<i>sarmentosus</i> , Linn.	B.	Evansii, <i>N.E.B.</i>	F.
<i>Saundersiae</i> , <i>Baker.</i>	?	fibrosa, <i>Baker.</i>	F.
<i>scandens</i> , <i>Thb.</i>	BC.	gracilis, <i>Harv.</i>	Z.
<i>Sprengeri</i> , <i>Regel.</i>	A.	laxiflora, <i>Kth.</i>	A.
<i>stipulaceus</i> , <i>Lam.</i>	BC.	longicollis, <i>Baker.</i>	?
<i>subulatus</i> , <i>Thb.</i>	?		

Kniphofia, <i>Continued.</i>			
Macowani, <i>Baker.</i>	CD.	narcissifolia, <i>Salm-Dyck.</i>	C.
modesta, „	C-E.	natalensis, <i>Baker.</i>	B.
multiflora, <i>W. & E.</i>	F.	nigra, <i>Schinz</i>	A.
natalensis, <i>Baker.</i>	A-F	11 <i>Bowiea, Harv.</i>	
parviflora, <i>Kth.</i>	Z.	volubilis, <i>Harv.</i>	B-E.
pauciflora, <i>Baker.</i>	A.	12 <i>Schizobasis, Baker.</i>	
pedicellata, „	?	Schlechteri, <i>Baker.</i>	?
primulina, „	?	13 <i>Eriospermum, Jacq.</i>	
Rooperi, <i>Lemaire</i> ,	Z.	Burchelii, <i>Baker.</i>	DE.
sarmentosa, <i>Kth.</i>	Z.	Cooperi, „	F.
Schlechteri, <i>Baker.</i>	D.	Junodii, „	A-B.
Schlechteri, <i>Schinz.</i>	F.	luteo-rubrum, „	B.
triangularis, <i>Kth.</i>	D.	McKenii, „	A-C.
Tuckii, <i>Baker.</i>	Z.	microphyllum, „	E.
sp. (<i>Evans</i> 649).	?	nataglencoense, <i>O. Kuntze.</i>	DE.
6 <i>Notosceptrum, Bth.</i>	D-E.	natalense, <i>Baker.</i>	AB.
natalense, <i>Baker.</i>	D.	ornithogaloides, <i>Baker.</i>	B.
sp. (<i>Wood</i> 6391).		sprengerianum, <i>Schinz.</i>	Z.
7 <i>Gasteria, Duval.</i>		14 <i>Anthericum, Linn.</i>	
Croucheri, <i>Baker.</i>	?	angulicaule, <i>Baker.</i>	A.
gracilis, „	?	capitatum, „	E.
8 <i>Aloe, Linn.</i>		Cooperi, „	?
Bainesii, <i>Dyer.</i>	B.	elongatum, <i>Willd.</i>	AB.
Boylei, <i>Baker.</i>	E.	Gerrardi, <i>Baker.</i>	BZ.
Cooperi, „	B-D.	hirsutum, <i>Thb.</i>	A.
ferox, <i>Miller.</i>	B-E.	longifolium, <i>Jacq.</i>	?
Greenii, <i>Baker.</i>	?	longistylum, <i>Baker.</i>	?
Kraussii, „	A-C.	pubescens, „	F.
Marshalli, <i>W. & E.</i>	E.	pulchellum, „	A-C.
minima, <i>Baker.</i>	A-F.	robustum, „	A.
myriacantha, <i>R. & S.</i>	?	Saundersiae, „	?
natalensis, <i>W. & E.</i>	A-D.	stenophyllum, „	DE.
parviflora, <i>Baker.</i>	A-B.	tenuifolius, <i>Hk.</i>	A.
platylepis, „	?	15 <i>Chlorophytum, Ker.</i>	
pratensis, „	C.	Bowkeri, <i>Baker.</i>	B.
purpurascens, <i>Harv.</i>	BC.	comosum, „	AB.
saponaria, <i>Harv.</i>	A-E.	durbanense, <i>O. Kuntze.</i>	?
supralævis, <i>Harv.</i>	?	elatum, <i>R. Br.</i>	B.
9 <i>Bulbinella, Kth.</i>	A.	Haygarthii, <i>W. & E.</i>	Z.
carnosa, <i>Baker.</i>		modestum, <i>Baker.</i>	?
10 <i>Bulbine, Linn.</i>		vaginatum, „	E.
aspodeloides, <i>R. & S.</i>	A-D.	16 <i>Agapanthus, L'Herit.</i>	
ensifolia, <i>Baker.</i>	C-D.	umbellatus, <i>L'Herit.</i>	B-E.
		var. minor, <i>Lodd.</i>	B-E.

17 <i>Tulbaghia</i> , <i>Linn.</i>		minor, <i>Baker.</i>	D.
acutiloba, <i>Harv.</i>	A-C.	Saundersiae, „	B.
alliacea, <i>Linn.</i>	AB.	Woodii, „	B-D.
leucantha, <i>Baker.</i>	B-E.		
natalensis, „	DE.		
violacea, <i>Harv.</i>	CD.		
18 <i>Drimia</i> , <i>Jacq.</i>		24 <i>Eucomis</i> , <i>L'Herit.</i>	
altissima, <i>Hook.</i>	B.	bicolor, <i>Baker.</i>	B-E.
angustifolia, <i>Baker.</i>	C.	humilis „	F.
elata, <i>Jacq.</i>	BC.	nana, „	F.
neriniformis, <i>Baker.</i>	F.	punctata, <i>L'Herit.</i>	DE.
		regia, „	?
		robusta, <i>Baker.</i>	?
		undulata, <i>Ait.</i>	A-E.
19 <i>Dipcadi</i> , <i>Medic.</i>		25 <i>Scilla</i> , <i>Linn.</i>	
ciliare, <i>Baker.</i>		Adlami, <i>Baker.</i>	?
hyacinthoides, <i>Baker.</i>	BD.	Cooperi, <i>Hk. f.</i>	B.
oreophila, <i>Schlter.</i>	F.	exigua, <i>Baker.</i>	C.
polyphyllum, <i>Baker.</i>	B.	humifusa, „	?
Readii, <i>Baker.</i>	E.	inandensis, „	A-B.
umbonatum, <i>Baker.</i>	A.	Kraussii, „	A-C.
viride, <i>Moench.</i>	B-E.	lancæfolia, „	A-C.
		laxiflora, „	?
20 <i>Galtonia</i> , <i>Dcne.</i>		linearifolia, „	B.
candicans, <i>Dcne.</i>	EF.	livida, „	?
princeps, „	BC Z.	megaphylla, „	Z.
21 <i>Albuca</i> , <i>Linn.</i>		natalensis, <i>Planch.</i>	BE.
affinis, <i>W. & E.</i>	E F.	var. <i>sordida</i> , <i>Baker.</i>	?
crinifolia, <i>Baker.</i>	B.	oostachys, <i>Baker.</i>	DE.
humilis, „	F.	palustris, <i>W. & E.</i>	D-E.
Nelsoni, <i>N.E.B.</i>	A.	polyantha, <i>Baker.</i>	D.
trichophylla, <i>Baker</i>	F.	pubescens, „	D.
22 <i>Urginea</i> <i>Steinh.</i>		Rehmanni, „	D.
berylloides, <i>Baker.</i>	B.	rigidifolia, <i>Kth.</i>	?
capitata, „	B.	var. <i>nervosa</i> , <i>Baker.</i>	A-B.
echinostachya, „	B.	„ <i>Gerrardi</i> , „	D-E.
lilacina, „	AB.	Sandersoni, <i>Baker.</i>	D-E.
multisetosa, „	DE.	saturata, „	A-D.
natalensis, „	B.	Schlechteri, „	?
pauciflora, „	?	socialis, „	?
riparia, „	B.	spathulata, „	?
rubella, „	DE.	subsecunda, „	?
Schlechteri, „	?	Tysoni, „	?
tenella, „	F.		
23 <i>Drimiopsis</i> , <i>Lindl.</i>		26 <i>Ornithogalum</i> , <i>Linn.</i>	
humifusa, <i>Baker.</i>	A.	albovirens, <i>Baker.</i>	D.
maculata, <i>Ldl.</i>	AB.	capillaris, <i>W. & E.</i>	D.
maxima, <i>Baker.</i>	BC.	diphyllum, <i>Baker.</i>	F.
		Eckloni, <i>Sch.</i>	A-B.
		graminifolium, <i>Thb.</i>	B.

Ornithogalum, <i>Continued.</i>			
inandense, <i>Baker.</i>	B.	28	Wurmbea, <i>Thb.</i>
leptophyllum, "	B-C.	Kraussii, <i>Baker.</i>	BE.
lineare, "	D.		
longiscapum, "	D.		
natalense, "	E-F.	29	Gloriosa, <i>Linn.</i>
oliganthum, "	B.	virescens. <i>Ldl.</i>	A.
stenostachyum, "	?		
umgenense, "	?		
virens, <i>Ldl.</i>	A-B.	30	Sandersonia. <i>Hk.</i>
Zeyheri, <i>Baker.</i>	F.	aurantiaca, <i>Hook.</i>	B-D.
27 Androcymbium, <i>Willd.</i>			
decipiens, <i>N. E. Brown</i>	A.	31	Littonia, <i>Hook.</i>
melanthoides, <i>Willd.</i>	F.	modesta, <i>Hook.</i>	A-D.
natalense, <i>Baker.</i>	B.	var. Keiti, <i>Reichb.</i>	B.

ORDER CLXXXI. XYRIDEÆ.

A small family containing two genera, one only of which is represented in Natal. They inhabit marshy ground, and the leaves and roots of some of the species have been used medicinally.

There are about 130 species.

Perennial herbs with radical leaves.

XYRIS.

LIST OF SPECIES.

1	Xyris. <i>Linn.</i>	Gerrardi, <i>N. E. B.</i>	Z.
	anceps, <i>Lam</i>	A. natalensis, <i>Nilss.</i>	A-Z.
	capensis, <i>Thb.</i>	B. umbilonis, "	A-B.

ORDER CLXXXIII. COMMELINACEÆ.

A family of succulent herbs, annual or perennial. In the Natal species the flowers are yellow or blue, in *Cyanotis nodiflora*, sometimes pink or white. They usually contain mucilage, and have been used medicinally in some countries, but our indigenous species are so far as known to us without value.

Number of species about 320.

Stamens 3 perfect. Staminodes 3, or fewer.	1
Stamens 6, rarely 5, all perfect.	2
1 Flowers issuing from spathe-like bracts.	COMMELINA.
1 Flowers paniculate, no spathe-like bracts.	ANEILEMA.
2 Flowers bursting through base of bracts.	COLEOTRYPE.
2 Bracts opening. Ovary 3-celled, cells 2-ovuled.	CYANOTIS.
2 Bracts minute or 0. Ovary 2-celled, cells 1-ovuled.	FLOSCOPA.

LIST OF SPECIES.

1 <i>Commelina</i> , <i>Linn.</i>	2 <i>Aneilema</i> , <i>R. Br.</i>		
<i>africana</i> , <i>Linn.</i>	?	æquinoctiale, <i>Kth.</i>	A-B.
var. <i>Barberiae</i> .	B-D.	Dregeanum, <i>Kth.</i>	BZ.
<i>benghalensis</i> , <i>Linn.</i>	BZ.	sinicum, <i>Ldl.</i>	AZ.
<i>eckloniana</i> , <i>Kth.</i>	?		
<i>Gerrardi</i> , <i>C. B. C.</i>	?	3 <i>Coleotrype</i> , <i>C. B. Clarke</i> .	
<i>karooica</i> ,	B.	natalensis, <i>C. B. C.</i>	A-B.
<i>Krebsiana</i> , <i>Kth.</i>	?		
<i>Livingstoni</i> , <i>C. B. C.</i>	B.	4 <i>Cyanotis</i> , <i>D. Don.</i>	
<i>nudiflora</i> , <i>L.</i>	A-BZ.	nodiflora, <i>Kth.</i>	A-E.
		5 <i>Floscopia</i> , <i>Lour.</i>	
		glomerata, <i>Hassk.</i>	A-B.
		Mannii, <i>C. B. Clarke</i> .	Z.

ORDER CLXXXV. FLAGELLARIEÆ.

A small Order containing three genera, one only of which reaches Natal, and is represented by one of its two species, it is a well-known plant, climbing amongst trees by means of its leaves which are terminated by tendrils, the stems were formerly used in thatching, and served to hold the stitches on the upper side of the thatch. It is known to the natives as u-Kanoti.

Number of species 3.

Fruit a drupe, 1-rarely 2-seeded.

FLAGELLARIA.

1 <i>Flagellaria</i> , <i>Linn.</i>	
<i>guineensis</i> , <i>Schumach.</i>	A-C.

ORDER CLXXXVI. JUNCACEÆ.

A small family of annual or perennial herbs or shrubs, of little special importance. The stems of some species of *Xanthorrhœa* yield a gum or resin which is used medicinally; they are natives of Australia, and are known as "Grass Gum" trees. Our native plant *Prionium palmata* or "Palmiet" yields a strong fibre suitable for brush making, and the leaves have been used for making hats, &c.; the plant is not uncommon about watercourses in the South Coast district.

Number of species about 200 or more.

Annual or perennial herbs, with basal glabrous leaves.

Ovary more or less completely 3-celled, many ovuled.

Perennial herbs with basal hairy leaves. Ovary 1-celled with 3, nearly basal ovules.

Undershrubs with rigid serrated leaves in a dense rosette at the top of a woody stem.

JUNCUS.

LUZULA.

PRIONIUM.

LIST OF SPECIES.

1 <i>Juncus</i> , <i>Linn.</i>		punctarius, <i>Linn.</i>	B.
<i>brevistylis</i> , <i>Buchanan.</i>	?	rostratus, <i>Buchan.</i>	?
<i>capensis</i> , <i>Linn.</i>	A-C.	2 <i>Luzula</i> , <i>DC.</i>	
<i>effusus</i> , <i>Linn.</i>	E.	africana, <i>Drege.</i>	D-F.
<i>lomatophyllus</i> , <i>Spreng.</i>	A-B.	3 <i>Prionium</i> , <i>E. Mey.</i>	
<i>maritimus</i> , <i>Lam.</i>	A.		
<i>oxycarpus</i> , <i>E.M.</i>	A-B.	palmita, <i>E. Mey.</i>	A.

ORDER CLXXXVII. PALMÆ.

A family well known for the use of its members as ornamental plants, and equally so for their valuable properties, a very short enumeration of which will be sufficient here. At the head of the list stands *Cocos nucifera*, the Cocoa-Nut Palm, which in addition to its eatable fruits yields oil and a large quantity of fibre known as "Coir." The Date Palm (*Phoenix dactylifera*) is also most useful, and in its native country yields its fruit in large quantities. What is known as the "Cabbage Palm" is an Areca, and it is so-called on account of its central bud being used as a culinary vegetable, it is said to be delicious, but must also be expensive, since cutting out the central bud means death to the plant, several other species may be used in the same way, and are equally palatable. *Elais guineensis* bears large drupes from which the "Palm Oil" of commerce is obtained, and a species of *Corypha* yields a wax which exudes from the trunk and leaves. Many species yield fibre of different kinds and also a fermentable sap from which a highly intoxicating spirit is obtained. The pith from the trunks of *Sagus*, and other genera is when prepared known as "Sago." The Canes of commerce are from the stems of different species of *Calamus*, these stems climb trees in the forests of India, and frequently attain a length of 300 feet. We have two indigenous species of Palmæ only, which are of no economic value, the stems of *Phoenix reclinata* were used by the natives for making the brooms that are sometimes offered for sale, and occasionally an intoxicating drink is made by them from the sap, the fruit also is eatable, but the drupes are small and contain but little pulp.

Number of species about 1100.

Trunk simple. Leaves pinnate.
Trunk branched. Leaves fan-like.

PHœNIX.
HYPÆNE.

LIST OF SPECIES.

1 <i>Phœnix</i> , <i>Linn.</i>		2 <i>Hyphæne</i> , <i>Gærtn.</i>	
<i>reclinata</i> , <i>Jacq.</i>	A-B.	<i>crinita</i> , <i>Gærtn.</i>	AZ.

ORDER CXC. TYPHACEÆ.

A small family of aquatic or marsh plants, containing two genera, *Typha* being the only two represented in Natal, and it is represented by one species only so far as known at present. The popular name of this plant is "Bulrush." The Order includes about 16 species.

Flowers in dense cylindrical heads "Bulrushes,"

TYPHA.

LIST OF SPECIES.

1 *Typha*, *Linn*,

capensis, *Rohrb*.

natalensis,

A-B.

A.

ORDER CXCI. AROIDEÆ.

The largest number of these plants are found in tropical and sub-tropical climates, but few occurring in colder countries. Many of the species possess acrid properties, and some have been used medicinally. What is known as "Tonga," and used as a remedy in neuralgia is prepared from the leaves of *Epipremnum mirabile*, a native of Fiji, where its medicinal properties have been long known. The tubers of some of the species are used as food, the "Taro" of the Pacific Islands is *Colocasia antiquorum*, and the "Madumbi" of the natives is a species of *Colocasia*, probably also *C. antiquorum*. Many species are cultivated for their ornamental foliage, such as the Alocasias, Anthuriums, Caladiums, Dieffenbachias, &c. The fruits of *Monstera deliciosa* are much esteemed in some countries, but do not appear to find much favour in Natal.

Number of species about 900.

Tall herbs with widely opening spathes.

RICHARDIA.

Low herbs with green scarcely opening spathes.

STYLOCHITON.

Floating herbs with rosulate sessile leaves.

PISTIA.

LIST OF SPECIES.

1 *Pistia*, *Linn*,

stratiotes, *Linn*.

3 *Richardia*, *Kunth*.

A-E.

africana, *Kunth*.

A-C.

albomaculata, *Hook*.

B-E.

hastata, *Hook*.

B-C.

melanoleuca, *Hk. f.*

D-E.

2 *Stylochiton*, *Leprieur*.

natalense, *Schott*.

A-B.

Rehmanni, *Engl*.

D-E.

var.

D-E.

ORDER CXCII. LEMNACEÆ.

A small family of minute plants which are found floating on the surface of still water, and which sink to the bottom during the winter months; the leaves or fronds are very minute, and often cover the whole surface of the pool in which they are found.

Number of species about 20.

Roots one or more. Flowers inserted on margin of fronds. Anthers 2-celled.

LEMNA.

Rootless. Flowers bursting from surface of frond. Anthers 1-celled.

WOLFFIA.

LIST OF SPECIES.

1 Lemna, Linn.	2 Wolffia, Horkel.	
minor, Linn.	A-B. Michellii, Schleid.	?
gibba, , ,		

ORDER CXCV. NAIDACEÆ.

A small family of aquatic or marsh herbs, none of which are of any special value to mankind. The species of *Triglochin* are said to be all marsh herbs, but we have found *T. bulbosum* growing on dry hills, and in crevices of rocks far from water or marshy ground.

Number of species about 120.

KEY TO GENERA.

Stigmas discoid or decurrent on the ovary.	1
Stigmas subulate or capillary.	4
1 Perianth of sepals or scales. Flowers bisexual.	2
1 Perianth none. Flowers unisexual.	3
2 Marsh herbs. Sepals 6, green	TRIGLOCHIN.
2 Aquatics. Sepals 1-3, white or coloured.	APONOGETON.
2 Aquatics. Sepals 4, herbaceous, green.	POTAMOGETON.
3 Aquatics. Stamen 1. Carpels usually sessile.	ZANNICHELLIA.
4 Aquatics. Flowers sessile, on a flat linear spadix.	ZOSTERA.

LIST OF SPECIES.

1 Triglochin, Linn.	4 Potamogeton, Linn.	
bulbosum, Linn.	B-E. americanus, Cham.	A.
laxiflorum, Guss.	A. crispum, Linn.	A-B.
striatum, Ruiz & Pav.	A. Friesii, Ruprecht.	A.
2 Aponogeton, Thb.	javanicus, Hassk.	C.
natalense, Oliver.	lucens, Linn.	A-B.
spathaceum, Hook.	natans, ,	A-B.
	pusillus, L.	A-B.
3 Zannichellia, Mich.	5 Zostera, Linn.	
palustris, Linn.	A. nana, Roth.	?

ORDER CXCVI. ERIOCAULEÆ.

A family containing 6 genera, only one of which is represented in Natal, by 7 named species of marsh herbs, none of which are of any economic value, the leaves are usually rosulate, and under the microscope are seen to be septate.

Sepals and petals 2-3. Petals free. Stamens in 2 rows, twice as many as petals or fewer by abortion. **ERIOCAULON.**

LIST OF SPECIES.

1 <i>Eriocaulon</i> , <i>Linn.</i>	Ruhlandii, <i>Schinz.</i>	A.
abyssinicum, <i>Hochst.</i>	D. Sonderianum, <i>Korn.</i>	Z.
africanum, "	B-C. sp. (<i>Schlechter</i> 2955)	A.
Dregei, "	A. Woodii, <i>N. E. Brown.</i>	B-C.
natalensis, <i>Schinz.</i>	A.	

ORDER CXCIII. RESTIACEÆ.

An Order whose members are for the most part found in South West Africa, and in Australia, a few in New Zealand and one each in Chili and Cochin China. Except that some of the species are used for thatching, they are of no economic value. Two species only are found in Natal and both are rare.

The Order includes about 230 species.

Ovary 3-2, or by abortion 1-celled. Fruit dehiscent. **RESTIO.**
Ovary 1-celled. Fruit indehiscent, 3-cornered. **LEPTOCARPUS.**

LIST OF SPECIES.

1 <i>Restio</i> , <i>Linn.</i>	2 <i>Leptocarpus</i> , <i>R. Br.</i>	
sejunctus, <i>Mast.</i>	? paniculatus. <i>Mast.</i>	B.

ORDER CXCIX. CYPERACEÆ.

A family of grass-like plants commonly known as "Sedges," they differ from the grasses by having solid, usually jointed and frequently angular stems, they are found all over the world, especially, perhaps, in the Northern Hemisphere, and are very frequent in moist situations, as fodder plants they are of little if any use. The roots of some of the species have been used medicinally, and those of *Cyperus esculentus*, and *C. rotundus* are more or less aromatic, those of *C. esculentus* are said to have been used as food by the natives of Africa, as also are the tubers of some species of *Scirpus* in Europe. From the stems of *Scirpus lacustris* mattresses are made in France, and those of some species of *Carex* are used for the seats of chairs. From the stems of *Papyrus antiquorum*, a native of different parts of Africa, a sort of paper was made by slicing the stem horizontally, flattening and drying under pressure, and then smoothing with an ivory or bone instrument.

The order contains more than 3000 species.

KEY TO SUBORDERS.

Fertile flowers all with perfect stamens, (in Natal species). **SCIPO-SCHÖNEÆ.**

Flowers all unisexual. Spikelets uni- or bisexual, if bisexual then consisting of 1 basal female flower, and 1 or many upper male flowers. **CARICEÆ.**

KEY TO TRIBES.

Empty glumes at the base of the spikelet 2 or 1, fertile glumes many, few or 1 to the spikelet, 2-ranked. (Rhachilla of the spikelet itself rarely twisted; after the glumes and nuts are fallen, the notches on the rhachilla can be seen to be exactly 2-ranked). Hypogynous bristles none.

Empty glumes at the base of the spikelet 2-0; fertile glumes arranged spirally, many, often very numerous.

Empty glumes at the base of the spikelet usually more than 2; fertile glumes few, very often 1.

A CYPERÆ.

B SCIRPEÆ.

C SCHÖNEÆ.

KEY TO GENERA.

SUB-ORDER SCIRPO-SCHÖNEÆ.

A. CYPERÆ.

Style 2-branched.

1

Style 3-branched.

2

1 Nut compressed laterally. Spikelet bearing 1-2 rarely more nuts.

1 Nut compressed laterally. Spikelet bearing several or many nuts.

1 Nut compressed dorsally.

2 Rhachilla of spikelet persistent.

2 Rhachilla of spikelet caducous.

KYLLINGA.

PYOREUS.

JUNCELLUS.

CYPERUS.

MARISCUS.

B. SCIRPEÆ.

Stem leafless with 1 terminal spikelet.

ELEOCHARIS.

Hypogynous bristles or scales none.

1

Hypogynous scales present.

2

1 Style base constricted above the nut, persistent or deciduous without leaving a button.

1 Style deciduous leaving a button on the nut.

1 Style passing gradually and continuously into the nut.

1 Ovary on a more distinct obpyrimidal gynophore, otherwise as *Scirpus*.

1 Spikelets conspicuously hairy, otherwise as *Scirpus*.

2 Hypogynous scales 2, hyaline, standing fore and aft within the glume; otherwise as *Scirpus*.

2 Hypogynous scale I, posticus, within the glume, and longer than it, thickened upwards, almost enveloping the nut; otherwise as *Scapus*.

FIMBRISTYLIS.

BULBOSTYLIS.

SCIRPUS.

FICINIA.

FIURENA.

LIPOCARPHA.

ASCOLEPIS.

C. SCHCENEÆ.

Style 2-fid, branches long, linear or very short (style then nearly entire).

RHYNCHOSPORA.

COSTULARIA.

CLADIUM.

Style 3-fid. Lowest flower male.

Style 3-fid. Lowest flower bisexual.

SUB-ORDER CARICIEÆ.

Nut bony, shining, on a gynophore.

SCLERIA.

Nut enclosed by a bottle-like bract, deeply split down, often containing a rhachilla or a male spike. No complete utricles.

SCHCENOXIPHUM.

Nut completely enclosed in a utricle. (In several androgynous species the utricle is split down in such spikelets as have the upper male portion or its rhachilla fully developed).

CAREX.

LIST OF SPECIES

1 *Kyllinga*, Rottb.*alba*, Nees.compressus, *Linn.* A.*var. alata*, C. B. C.corymbosus, *Rottb.* A.*Buchananii*, C. B. Clarkedenudatus, *L. f.* B.*cylindrica*, Nees.diformis, *Linn.* A.*elatior*, Kth.

distans, " A-C.

erecta, Schumach.

esculentus, " A-C.

Lehmannii, Nees.flabelliformis, *Rottb.* A-C.*melanosperma*, Nees.

haematocephalus, C. B. Clarke. D.

pauciflora, Ridley.

immensus, C. B. Clarke. A.

2 *Pycreus*, Beauv.

isocladus, Kth. A.

angulatus, Nees.latifolius, *Poir.* A-Z.*chrysantha*, C. B. Clarke.var. *angustifolius*, Krauss. A.*elegantulus*,

leptocladus, Kth. A.

ferrugineus,

marginatus, Thb. C.

flavescens, Reichb.

natalensis, Hochst. A.

maeranthus, C. B. Clarke.rotundus, *Linn.* AB.*Mundtii*, Nees.

rupestris, Kth. B.

Oakfortensis, C. B. Clarke.

Schlechteri, C. B. C. F.

polystachyus, Beauv.

sexangularis, Nees. AB.

var. laxiflora, Bth.

sphaerospermus, Schrad. AB.

Rehmannianus, C. B. Clarke.

tenax, Baeckler. ?

umbrosus, Nees.

Teneriffæ, Poir. ?

3 *Juncellus*, C. B. Clarke.5 *Mariscus*, Gertn.*laevigatus*, C. B. Clarke A.

congestus, C. B. Clarke. A-F.

4 *Cyperus*, Linn.var. *glandulifera*, C. B. C. ?*albostriatus*, Schrad.

Cooperi, C. B. Clarke. ?

compactus, Lam.

deciduus, C. B. Clarke. DE.

var. flavissimus, C. B.

Dregeanus, Kth. A.

Clarke.

var. *Buchananii*, C. B. C. A.*elatior*, C. B. Clarke.

elephantinus, " A.

Mariscus, <i>Continued.</i>		
Grantii, <i>C. B. Clarke.</i>	?	
Gueinzii, „	A.	
macer, <i>Kth.</i>		
macrocarpus, <i>Kth.</i>	A.	
nossibeensis, <i>Stead.</i>	?	
Owani, <i>C. B. Clarke.</i>	A.	
pseudo-vestitus, <i>C. B. Clarke</i>	AB.	
radiatus, <i>Hochst.</i>	A.	
sieberianus, <i>Nees.</i>	A-C.	
umbellatus, <i>Vahl.</i>	A.	
umbilensis, <i>C. B. Clarke.</i>	A.	
vestitus, „	A.	
6 <i>Eleocharis, R. Br.</i>		
limosa, <i>Schultes.</i>	A.	
7 <i>Fimbristylis, Vahl.</i>		
complanata, <i>Linn.</i>		
var. Kraussiana, <i>C. B. Clarke.</i>	A.	
var. consanguinea, <i>C. B. Clarke.</i>	A.	
diphylla, <i>Vahl.</i>	A.	
exilis, <i>Roem & Schultes.</i>	AZ	
ferruginea, <i>Vahl.</i>	A.	
monostachya, <i>Hassk.</i>	A-D.	
obtusifolia, <i>Kth.</i>	A.	
8 <i>Bulbostylis, Kunth.</i>		
cinnamomea, <i>C. B. Clarke.</i>	B.	
collina, <i>Kth.</i>	BZ.	
humilis, „	B.	
Kirkii, <i>C. B. Clarke.</i>	B.	
striatella, „	?	
Zeyheri, „	A.	
9 <i>Scirpus, Linn.</i>		
cernuus, <i>Vahl.</i>	B.	
expallescens, <i>Boeckl.</i>	B.	
fluitans, <i>Linn.</i>	E-F.	
hystrix, <i>Thb.</i>	A-D.	
littoralis, <i>Schrad.</i>	A.	
macer, <i>Boeckl.</i>	A-D.	
paludicola, <i>Kth.</i>	?	
prolifer, <i>Rottb.</i>	AB.	
rivularis, <i>Boeckl.</i>	AB.	
subprolifer, <i>Boeckl.</i>	?	
10 <i>Ficinia, Schrad.</i>		
cinnamomea, <i>C. B. Clarke.</i>		B.
gracilis, <i>Schrad.</i>		?
laciniata, <i>Nees.</i>		A.
stolonifera, <i>Boeckl.</i>		F.
11 <i>Fuirena, Rottb.</i>		
chlorocarpa, <i>Ridl.</i>		?
cœrulescens, <i>Steud.</i>		A-B.
Ecklonii, <i>Nees.</i>		A.
glabra, <i>Eckl.</i>		C.
gracilis, <i>Kth.</i>		?
microlepis, <i>Kth.</i>		A.
pachyrrhiza, <i>Ridley.</i>		B.
pubescens, <i>Desf.</i>		B.
12 <i>Lipocarpha, R. Br.</i>		
argentea, <i>R. Br.</i>		AB.
pulcherrima, <i>Ridley.</i>		?
13 <i>Ascolepis, Steud.</i>		
capensis, <i>Ridl.</i>		AB.
14 <i>Rynchospora, Vahl.</i>		
aurea, <i>Vahl.</i>		A.
cyperoides, <i>Mart.</i>		A.
glauca, <i>Vahl.</i>		B.
spectabilis, <i>Hochst.</i>		A.
15 <i>Costularia, C. B. Clarke.</i>		
natalensis, <i>C. B. Clarke.</i>		?
16 <i>Oladium, P. Browne.</i>		
mariscus, <i>R. Br.</i>		A.
17 <i>Scleria, Berg.</i>		
angusta, <i>Nees.</i>		Z.
catophylla, <i>C. B. Clarke</i>		A.
hirtella, <i>Sw.</i>		A.
holcoides, <i>Kth.</i>		A.
melanocephala, <i>Kth.</i>		AB.
natalensis, <i>Boeckl.</i>		?
Woodii, <i>C. B. Clarke.</i>		EZ.
18 <i>Schœnoxiphium, Nees.</i>		
rufum, <i>Nees.</i>		A.

19 <i>Carex</i> , <i>Linn.</i>			
<i>Bolusii</i> , <i>C. B. Clarke.</i>	?	<i>Essenbeckiana</i> , <i>Boeckl.</i>	F.
<i>Buchananii</i> , " <i>condensata</i> , <i>Nees.</i>	?	<i>extensa</i> , <i>Gooden.</i>	C.
<i>drakensbergensis</i> , <i>C. B.</i> <i>Clarke.</i>	?	<i>petitiana</i> , <i>A. Rich.</i>	?
<i>Dregeana</i> , <i>Kth.</i>	EF.	<i>phaeota</i> , <i>Spreng.</i>	D-F.
	B.	<i>spicato-paniculata</i> , <i>C. B.</i> <i>Clarke.</i>	B.

ORDER CC. GRAMINEÆ.

(BY O. STAPF).

Partial inflorescences (*spikelets*) consisting of an axis *rhachilla*) and typically, of 3 or more alternate, distichous, more or less heteromorphous bracts, of which the 2 lowest (*glumes*) form an involucre to the spikelet and are empty, whilst the following (*valves*) bear in their axils sessile flowers, subtended by a usually hyaline, 2 keeled or 2 nerved dorsal bract (*pale*) ; valves differing usually in structure and size from the glumes, and forming with the pale and the flower proper, false flowers (*florets*), which are alike or different in structure or sex, and often more or less reduced toward the top of the spikelet. Flowers hermaphrodite, or unisexual (often with the rudiments of the other sex), consisting of 3, or usually, of 2 (anterior) minute hyaline or fleshy, nerved or nerveless scales (*lodicles*), representing a perianth, and of stamens or of a pistil, or of both. Stamens usually 3, rarely 6, 4, 2 or 1, very rarely more, hypogynous ; filaments very slender, nearly always free, anthers versatile, consisting of 2 parallel cells, opening longitudinally by a slit, rarely by a terminal pore. Ovary entire, 1 celled, styles 2, lateral, rarely 3 or 1, free or more or less united, sometimes very short ; stigmas as many as the styles, with simple or branched stigmatic hairs, exserted from the sides or top of the florets ; ovule 1, anatropous, often more or less adnate to the posterior side of the carpel. Fruit with the thin pericarp adnate to the seed (*caryopsis*, *grain* ; rarely a nut or berry), with two marks, an anterior indicating the position of the embryo, and a posterior (*hilum*), free within the valve and pale, or adhering to the latter, rarely to both, usually forming with them a false fruit which becomes free by the disarticulation of the rhachilla. Seed erect ; albumen copious, starchy ; embryo usually small on the anterior face at the base of and outside the albumen ; cotyledon shield-like (*scutellum*), closely attached by its inner side to the albumen, having the plumule and the descending radicle in front, and sometimes also a smaller anterior appendage opposite it (*epiblast*).

Herbs, rarely suffruticose, or in *Bambuseæ* often tall shrubs or trees, annual, or perennial by means of rhizomes, rarely of aerial woody stems. Stems nearly always (often repeatedly and profusely) branched at the base, very rarely simple, thus forming fascicles or tufts of erect, ascending, prostrate or creeping, simple or ramified branches, which in the annual species are all more or less alike, having usually much shortened basal and lengthened upper internodes, terminating with an

inflorescence (*culms*) or, in the perennial species, consist of culms and short, leafy, usually biennial shoots (*innovation shoots*) which grow into culms only in the second season; innovation shoots either piercing the subtending sheath at the base and growing up outside it, often as runners or stolons (*extravaginal*), or inside the sheaths, which may or may not be thrown aside (*intravaginal*); culms jointed, internodes usually hollow, closed at the nodes, with or without an annular swelling above the nodes and within the sheaths (*culm nodes*), all the branches and their leaf-supported ramifications with a 2-keeled dorsal, usually hyaline, leaflet at the base. Leaves alternate, usually 2-ranked, rarely pseudo-opposite owing to the alternation of long and very short internodes, very often crowded in tufts or fan-shaped bunches at the base of the culms, or in some cases also of their upper branches, in the perfect form (foliage leaves or "leaves" simply) consisting of sheath ligule and blade, sheaths with the margins free (*open sheaths*) or more or less connate (*closed sheaths*), clasping each other or the culm, finally often loosened or sometimes slipping from the culm and more or less spreading, of the same structure throughout, or with an annular succulent swelling at the base (*sheath nodes*), which becomes at length hardened and persistent, or partly shrinks, leaving a depressed, often dark coloured annular mark; ligules placed transversely at the inside of the junction of the sheath and blade, consisting of a membrane or of a fringe of hairs, rarely altogether absent; blades usually long and narrow, entire, parallel-nerved, rarely ovate, cordate or sagittate, usually more or less gradually passing into the sheath, rarely articulated with it or constricted at base into a petiole, folded or convolute in the bud, and often folding or rolling up in the mature state as they become dry, usually much reduced or quite suppressed in the lowest leaves which, in the perennial species act as bud scales, sometimes also in the upper leaves.

Inflorescence terminal, rarely terminal and lateral, built up of the variously arranged spikelets, panicle, racemose, capitate, simply, or compoundly spicate, very rarely consisting of a single spikelet, nearly always ebracteate. Spikelets all alike or heteromorphous, differing in sex and (in correlation with the sex) more or less also in the general structure, bisexual with all the flowers hermaphrodite, or with hermaphrodite and male, or female and male flowers in the same spikelet, or unisexual (monoecious or dioecious). Mature spikelet falling entire from the tips of the pedicels, or together with a part of the pedicel or of the rhachis, or breaking up above the glumes into as many false fruits as there are fruiting florets, rarely persistent and shedding the grains. In the first case the glumes, in the second the valves are often decurrent into a callous swelling or extension (*callus*) at the insertion on the pedicel or rhachilla respectively.

About 325 genera, comprising 3,000 to 3,500 species in all parts of the world.

The typical structure of the spikelets is sometimes more or less obscured by the reduction or suppression, or by peculiar modifications of certain parts, generally in obvious correlation to the loss of functions,

or the assumption of functions other than usual. The morphological character of those parts may, however, usually be recognised from their position in the spikelet and from comparison with allied, less modified species. Reduction or suppression is frequent in the glumes, less so in the pales, and it is extremely rare in the valves, except the reduced florets. The lower valves, are, in certain tribes, frequently without a flower; but they often enclose a rudiment of a floral branch let, in the shape of a perfect or reduced pale, thereby indicating their homology with typical valves. In this case, they often lose some of the characteristics of the fertile valves, and approach either to the glumes in their structure, or assume some special structure differing from that of the glumes as well as from that of the fertile valves. The nervation of the valves is very constant in nearly all the genera, and often throughout the greater part of a tribe; but in order to see it clearly, it is always advisable to flatten the valve and to examine it by transmitted light in a drop of water. When the sexual conditions of the florets are of importance, it should be kept in mind, that many grasses are very distinctly protandrous, *i.e.*, that they shed their anthers some time before the stigmas expand. Such flowers have frequently been taken to be female, whilst they were actually hermaphrodite. To avoid this error, young spikelets should, if possible, be examined beside the fully developed ones, or the filaments which usually remain around the ovary should be sought for.

SERIES I.

Mature spikelets falling entire from their pedicels or with them (rarely subpersistent on a flat, indistinctly and tardily disarticulating rhachis; *Stenotaphrum*) all alike or differing in sex and structure; perfect spikelets with 2 heteromorphous florets, the upper hermaphrodite, the lower male or barren; rhachilla not continued beyond the upper floret.

Spikelets falling entire, singly or in clusters, occur in the following genera belonging to the second series; *Holcus*; *Chætobromus*; *Polygonum*; *Perotis*; *Tragus*; *Desmostachya*; *Spartina*; *Lamarckia*; *Fingerhuthia*; *Urochæna*; *Tetrachne*; *Entoplocamia*.

Tribe 1. **Andropogoneæ** Spikelets usually in pairs, one sessile, the other pedicelled (see *Trachypogon*), rarely 3-nate or solitary on the axes of variously arranged, often spikelike racemes. Glumes more or less rigid and firmer than the valves, and the lower always longer than the florets. Valves membranous, often hyaline, that of the upper floret generally awned or reduced to an awn.

Imperata; *Saccharum*; *Erianthus*; *Pollinia*; *Ischænum*; *Rottbœllia*; *Urelytrum*; *Trachypogon*; *Eliurus*; *Andropogon*; *Anthistiria*.

Tribe 2. **Paniceæ**. Spikelets in usually continuous spikes, racemes or panicles. Glumes herbaceous or membranous, the lower smaller very small or suppressed. Lower valve generally resembling

the glumes in structure and nervation, the upper firmer, at length rigid, often chartaceous to crustaceous, awnless, very rarely mucronate.

Paspalum; *Digitaria*; *Panicum*; *Oplismenus*; *Axonopus*; *Setaria*; *Pennisetum*; *Stenotaphrum*; *Tricholæna*; *Melinis*.

SERIES II.

Mature spikelets breaking up, leaving the persistent or sub-persistent glumes on the pedicel, or if falling entire, then not consisting of 2-heteromorphous florets as in Series I.

Tribe 3. *Arundinelleæ*. Florets 2, heteromorphous, the lower awnless, male or barren. Rachilla not continued beyond the upper floret. Lower valve awnless, rather resembling the glumes; upper generally (always in the African species) awned, at length firm or hard; awn from the sinus between 2 sometimes minute or bristle-like lobes, rarely from the entire, obtuse tip, usually kneeled and twisted below the knee.

Arundinella; *Trichopteryx*; *Tristachya*.

Tribe 4. *Aveneæ*. Florets 2 to many, all alike (except the uppermost which often are gradually reduced) or more or less heteromorphous (slightly in *Holcus*; *Chætobromus*; and sometimes in *Aira*, very distinctly in *Anthoxanthum*). Glumes generally hyaline or scariosus and shining. Valves membranous or sub-herbaceous with hyaline shining margins, 5 or more nerved, rarely 3-nerved (with the side nerves delicate and not sub-marginal); awn, if present, from the back or from a sinus, or from between bristles, kneeled and usually twisted below the knee (See *Koeleria*).

Anthoxanthum; *Koeleria*; *Avenastrum*; *Pentaschistis*.

Tribe 5. *Arundineæ* Florets 2 to many, enveloped by very long hairs, springing either from a long and slender callus or from the back of the valves. Glumes and valves membranous, often hyaline, awnless or minutely awned from the tips.

Phragmites.

Tribe 6. *Agrosteæ*. Floret 1. Rhachilla not continued beyond the floret or only as a more or less distinct point or bristle. Valve membranous (in South African species) or thinly herbaceous, not or hardly changed when mature, usually truncate, 5-very rarely 3-nerved, all the nerves or the outer side nerves often slightly excurrent, parallel or at least not anastomosing; awn if present, from the back, rarely from the truncate tip.

Polypogon; *Agrostis*; *Calamagrostis*.

Tribe 7. *Stipeæ*. Floret 1. Rhachilla not continued beyond the floret. Valve hardening when mature, tightly enveloping the fruit; nerves joining or closely approaching at the tip; awn terminal, rarely 0.

Aristida; *Stipa*.

Tribe 8. **Zoysieæ.** Mature spikelets falling entire and singly, or in clusters. Floret 1. Rhachilla not continued beyond the floret. Glumes equal, or the lower much smaller or suppressed. Valve small, delicately membranous, 3-1-nerved. Spikelets in slender spiciform panicles or racemes.

Perotis; Tragus.

Tribe 9. **Sporoboleæ.** Glumes and valves very similar. Floret 1. Rhachilla very rarely continued beyond the floret. Valve membranous, acute or obtuse, not changed when ripe, 1-or more or less distinctly 3-nerved, awnless, usually olive green or olive grey; side nerves, if present, delicate, evanescent above. Seed often free in the delicate pericarp.

Sporobolus. The only genus.

Tribe 10. **Eragrostæe.** Spikelets variously panicle, sometimes spicate, or subspicate. Florets usually numerous and far exserted from the glumes. Glumes and valves rather similar in general appearance. Valves membranous to chartaceous, very often olive green or olive grey, entire, or 3-cleft, 3 nerved; nerves evanescent above or excurrent into bristles; side nerves submarginal, glabrous or pubescent or finely ciliate below. Pales often persistent or subpersistent.

Pogonarthria; Diplachne; Eragrostis.

Tribe 11. **Chlorideæ.** Spikelets usually in 2-ranked, secund spikes or spike-like racemes, rarely distinctly pedicelled and panicle. Florets 1 to many. Valves generally membranous, truncate, emarginate or toothed, 3-nerved; nerves distant, subparallel, distinct, percurrent or excurrent, and often ciliate all along, lateral submarginal (See *Spartina* with 1-nerved valves, and *Eleusine* which has sometimes additional side-nerves close to the middle nerve of the valve); awn if present, straight, usually from a truncate or toothed tip.

Cyndon; Michrochloa; Ctenium; Harpechloa; Chloris; Eleusine; Dactyloctenium; Leptocarydium; Crossotropis; Triraphis.

Tribe 12. **Pappophoreæ.** Valves broad, cleft into 3 to many sometimes subulate lobes with or without alternating fine straight awns from the sinuses, usually many nerved.

Not represented in Natal.

Tribe 13. **Oryzeæ.** Spikelets all alike or more or less heteromorphous and unisexual. Fertile floret 1, awnless, very rarely caudate-aristate, terminal with 2 minute empty florets (valves) below it or solitary. Glumes very minute or confluent into an annual rim or suppressed. Pales 3-9 nerved. Stamens usually 6, rarely more or 3-1.

Potamophila; Leersia.

Tribe 14. **Phalarideæ.** Spikelets all alike. Fertile floret 1, awnless, terminal with 2 empty florets (valves) below it. Glumes distinct, often equalling or exceeding the terminal floret. Pales 2-nerved to nerveless. Stamens 6-3 (in the African species), or 4 or 2.

Ehrharta; Phalaris.

Tribe 15. **Festuceæ** Glumes more or less resembling the valves in general appearance. Fruiting florets 2 to many, very rarely 1, often much exserted from the glumes. Valves 5-or more nerved, very rarely 3-or 1-nerved, then with the side nerves not submarginal nor with the spikelets in 2-ranked spikes; awns if present terminal or subterminal, never kneeled.

Melica; *Fingerluthia*; *Poa*; *Festuca*; *Bromus*; *Brachypodium*; *Stiburus*; *Vulpia*.

Tribe 16. **Hordeæ**. Spikelets sessile, singly or in clusters on the notches of a simple spike, sometimes partially sunk in hollows of the same. Florets 1 or more.

Lolium.

Tribe 17. **Phareæ**. Spikelets heteromorphous, unisexual, monœcious, the male small. Floret 1. One or both glumes of the male often minute or obsolete. Fruiting valve coriaceous to cartilaginous. Lodicules 3. Stamens 3-6. Blades flat, broad, many nerved, often petioled.

Olyra. The only South African genus.

Tribe 18. **Bambuseæ**. Spikelets all of one kind. Florets few to many, rarely 1. Glumes distinct or indistinctly differentiated, *i.e.*, passing below into more or less numerous bracts and sometimes having like them flowering branchlets or spikelets in their axil, and at the same time resembling the valves. Valves subherbaceous to subcoriaceous, 5-to many nerved, generally awnless. Lodicules usually 3. Stamens 3, 6 or more. Styles 2 or 3. Shrubs or trees. Blades flat, many nerved, articulated on the sheath.

Arundinaria.

KEY TO GENERA.

SERIES I.

TRIBE 1. ANDROPOGONEÆ.

Spikelets all alike. Racemes in compound panicles (except *Pollinia*) joints of the rhachis slender.

A.

The two spikelets of each pair differing in sex and structure (in South African species, except in *Ischænum fasciculatum*, where the difference is limited to the lower glume).

B.

A.

Racemes in a spiciform silky panicle; rhachis not fragile. Spikelets awnless.

IMPERATA.

Racemes in large much branched silky panicles, rhachis fragile. Spikelets awnless.

SACCHARUM.

Racemes in large much branched silky panicles, rhachis fragile. Spikelets awned.

ERIANTHUS.

Racemes 2-nate, digitate or approximate on a short axis.

POLLINIA.

B.

Sessile spikelets not sunk in hollows. Racemes spiciform, solitary 2-nate, digitate or approximate on a short main axis. Lower floret of the sessile spikelet always male.

ISCHLEUM.

Sessile spikelets sunk in hollows formed by the contiguous joint of the rhachis and the appressed or adnate pedicel of the pedicelled spikelet of the same pair.

1

Rhachis as in *Saccharum* and *Ischæum*. Racemes variously arranged. Lower floret of all spikelets empty; upper floret usually awned.

2

1 All spikelets awnless.

ROTTBÆLLIA.

1 Pedicelled spikelets long awned.

URELYTRUM.

2 Rhachis tough, indistinctly articulate. Spikelets all pedicelled, the fruiting one deciduous.

TRACHYPOGON.

2 Rhachis of the spike-like solitary raceme fragile, one spikelet of each pair sessile, the other pedicelled, both awnless.

ELIONURUS.

2 Racemes solitary, 2-nate, digitate or pedicelled; rhachis fragile. The sessile spikelet awned, but not from the upper valve. No whorl of male spikelets at base of the raceme, or where an imperfect one occurs the racemes are always paired, and each pair is subtended by a spathe.

ANDROPOGON.

2 Racemes short, crowded on spathaceous panicle fascicles, each with a whorl of 4 or more male or barren spikelets at the base, and supported by a proper spathe.

ANTHISTIRIA.

TRIBE II. PANICEÆ.

Glumes and low valve entire, awnless or caudate, or subulate aristate. Fruiting valve sub-chartaceous to crustaceous.

1

Glumes and lower valve 2-lobed or emarginate with a fine awn or mucro from the sinus, rarely all muticous. Fruiting valve rigidly membranous.

4

1 Mature spikelets falling entire and singly from the tips of their pedicels.

2

1 Mature spikelets not falling singly or not from the tips of their pedicels.

3

2 Spikelets awnless. Lower glume 0. Lower valve quite empty, nerves 5 or fewer, side-nerves curved, usually sub-marginal.

PASPALUM.

2 Spikelets small, awnless. Lower glume minute, rarely 0. Lower valve generally with a minute pale; nerves 5-7, close, straight, prominent.

2 Spikelets awnless, or the glumes and the lower valve caudate-mucronate, or caudate-aristate. Lower glume distinct. Lower valve with a 2-nerved or a hyaline rudimentary pale, or quite empty.

2 Spikelets fascicled or solitary on a simple axis, or on the branches of a panicle. Glumes and lower valve, or at least the lower glume subulate-aristate.

2 Spikelets of *Panicum* Upper glume fimbriate. Lower valve with a deeply cleft short pale and a male flower.

2 Spikelets of *Panicum*, but subtended by bristles.

3 Spikelets surrounded singly or in small clusters by an involucre (formed by naked or plumose bristles) and falling with it.

3 Spikelets sub-persistent on the flat indistinctly and tardily disarticulating rhachis of a false spike.

4 Upper glume and lower valve 5-nerved; nerves usually very faint, hidden by copious and long silky hairs, and anastomosing below the obtuse tips.

4 Upper glume 7-, lower valve 5-nerved, nerves straight, conspicuous, not anastomosing below the acute tips.

DIGITARIA.

PANICUM.

OPLISMENUS.

AXONOPUS.
SETARIA.

PENNISETUM.

STENOTAPHRUM.

TRICHOLOENA.

MELINIS.

SERIES II.

*A. Blades never transversely veined (in South African species, except sometimes in *Arundo*) nor articulated on the sheath.*

Awns if present, kneeled and twisted below the knee, or straight in reduced forms.

Awns if present never kneeled and twisted below the knee.

Florets 2, or more in the following:

Arundinelleæ; Aveneæ; Arundineæ.

Floret 1, in the following:

Agrostæ; Stipeæ; Zoysieæ.

GROUP A.

GROUP B.

GROUP A.

FLORETS 2, OR MORE.

TRIBE III. ARUNDINELLEÆ.

Spikelets solitary on distinct pedicels.

Spikelets in clusters of 3.

1

2

- 1 Spikelets small ($2\frac{1}{2}$ lines to less than 1 line). Valve of the upper floret 2-setose, minutely 2-toothed or entire, awn sometimes reduced or absent. Flaps of the pale auricled.
- 1 Spikelets large (2 line to $1\frac{1}{2}$ inch). Valve of the upper floret always distinctly 2-toothed or 2-lobed, awn always kneeled. Flaps of the pale not auricled.
- 2 Spikelets as in *Trichopteryx*.

ARUNDINELLA.

TRICHOPTERYX.
TRISTACHYA.

TRIBE IV. AVENEÆ.

Valves awnless or awned; awn if present, from the back of the valve.

Valves awned, rarely mucronate, awn or muero from the sinus or the more or less distinctly 2-lobed valve, lobes often bristle-like.

1 Florets 3, heteromorphous; the lower 2 male or barren, awned, the terminal hermaphrodite, awnless. Rhachilla not continued beyond the upper floret.

1 Florets 2 or more, the uppermost gradually reduced. Rhachilla glabrous or almost so. Valves 3-5 nerved, awnless or mucronate or minutely awned from, or from below the tip. Panicle spiciform.

1 Spikelets erect or suberect. Florets 2 or more, the uppermost gradually reduced. Glumes usually 1-3 nerved. Valves herbaceous, 5-9-nerved, rather firm, awned from the back. Ovary top hairy. Perennial.

2 Florets 2, continuation of rhachis minute or bristle-like. Lobes of the valve 2-rarely 4-fid, both or all 4 divisions bristle-like, or only the inner, with the outer lobule minute and more or less adnate to it.

ANTHOXANTHUM.

KŒLERIA.

AVENASTRUM.

PENTASCHISTIS.

TRIBE V. ARUNDINEÆ.

Florets heteromorphous; the lowest male or barren, the rest hermaphrodite, hairy from the long slender callus, otherwise glabrous.

PHRAGMITES.

FLORET I.

TRIBE VI. AGROSTEÆ.

Glumes awned, usually from a minute notch or sinus. Glumes not awned. Callus glabrous or shortly bearded. Glumes not awned. Callus with long fine hairs, several times longer than the valve.

POLYPOGON.
AGROSTIS.

CALAMAGROSTIS.

TRIBE VII. STIPEÆ.

Awns 3 from the entire tip, or one, simple below and 3-branched above, very rarely quite simple, kneeed and twisted below the knee. Ligule a fringe of hairs.

Floret cylindric or linear-oblong; awn solitary, simple, kneeed and twisted below the knee. Ligule membranous.

ARISTIDA.

STIPA.

PEROTIS.

TRAGUS.

TRIBE VIII. ZOYSIEÆ.

Spikelets falling singly. Glumes equal, long awned.

Spikelets falling in clusters of 2-4, upper (outer) glume beset with hooked spines, or short bristles.

GROUP B.

Valves 3-nerved, rarely 1-nerved (Sporoboleæ; Eragrosteeæ; Chlorideæ).

Valves 5-many nerved, very rarely (as in *Triphlebia*) 3-nerved. Oryzeæ; Festuceæ; Hordeæ; Phalarideæ.

TRIBE IX. SPOROBOLEÆ.

The only genus represented in Natal.

SPOROBOLUS.

TRIBE X. ERAGROSTEÆ.

Spikelets densely crowded on the flattened rhachis of stiff secund false spikes, which are spirally arranged on a long axis. Tips of rhachilla joints fringed with minute hairs. Valves acuminate, entire.

Spikelets more distant, or even remote on the slender rhachis of often flexuous false spikes. Valves usually 2-toothed or minutely notched.

Spikelets usually panicled, rarely in simple spikes. Rhachilla often persistent. Valves usually numerous and closely imbricate, broad, entire, awnless. Pales persistent or deciduous, but usually not falling together with the valves.

POGONARTHRIA.

DIPLACHNE.

ERAGROSTIS

TRIBE XI. CHLORIDEÆ.

Spikelets crowded in 2-ranked secund spikes.

Spikelets panicled, pedicelled (though often very shortly) or subspicate but not on the flattened rhachis of a 2-ranked, secund spike.

1 Foret 1, awnless. Rhachilla not continued beyond the floret, or only as a minute point, or a naked bristle.

1 Florets several, one hermaphrodite, the others male or barren.

1

5

2

3

1 Several to many hermaphrodite florets in each spikelet. Seeds free within the delicate dehiscing or rupturing pericarp. 4

2 Glumes shorter than the glabrous, sub-chartaceous valve.

2 Glumes longer than the ciliate membranous valve.

3 Upper glume generally with a stiff bristle from the back. Lowest 2 florets barren, or the second male, the third hermaphrodite.

3 Spike solitary, terminal, spikelets awnless, lowest floret hermaphrodite.

3 Spikes 2-to many, digitate or fascicled. Spikelet awned or awnless. Lowest floret hermaphrodite.

4 Spikes terminated by a spikelet.

4 Point of the rhachis of the spikes, naked, projecting.

5 Spikelets sub-sessile in dense spiciform panicles. Florets distinctly (often long) exserted from the glumes. Valves long and finely awned; side nerves not excurrent. Blades constricted and rounded at the base.

5 Spikelets sub-sessile in racemously arranged erect or spreading false spikes. Florets equalling or slightly exceeding the glumes, or much shorter. Valves very shortly awned. Side nerves not excurrent. Blades not constricted at the base.

5 Spikelets usually distinctly pedicelled, often in compound and dense panicles. Valves finely awned; side-nerves excurrent into long or short bristles.

CYNODON.
MICROCHLOA.

CTENIUM.

HARPECHLOA.

CHLORIS.
ELEUSINE.

DACTYLOCTENIUM.

LEPTOCARYDIUM

CROSSOTROPIS.

TRIRAPHIS.

TRIBE XII. PAPPOPHOREÆ.

Not represented in Natal.

TRIBE XIII. ORYZEÆ.

Fruiting valve membranous to sub-herbaceous, smooth, with 2 minute nerveless empty valves below it.

POTAMOPHILA.

Fruiting valve chartaceous, rigidly ciliate (in the African species) without empty valves below it.

LEERSIA.

TRIBE XIV. PHALARIDEÆ.

Both empty florets or at least the upper larger than the fertile, exceeding or equalling the glumes.

EHRHARTA.

Empty florets reduced to minute scales, enclosed together with the fertile floret by the glumes.

PHALARIS.

TRIBE XV. FESTUCEÆ.

Glumes more or less equaling the florets, membranous.

Uppermost 2-3 valves small, empty, enclosing each other and forming a club- or spindle-shaped body.

MELICA.

Spikelets in panicled clusters, or more or less spiciform panicles or true spikes, very rarely in loose panicles (*Briza*). Valves membranous to papery or sub-chartaceous, 5-9 nerved, very rarely 3-nerved (*Triphlebia*), side nerves conniving or joining below the tip; awns if any, fine, short, terminal or sub-terminal.

1

Spikelets generally loosely panicled. Florets exserted from the glumes. Valves generally rather broad, ovate or oblong, often obtuse, membranous to herbaceous, often with broad and variegated hyaline margins or tips, awnless; side nerves 2, sometimes 3 or 1 on each side, often faint.

2

Spikelets generally loosely panicled or racemose or spuriously spicate. Florets exserted from the glumes. Valves herbaceous to sub-chartaceous usually acute or acuminate, often more or less mucronate or awned from the entire or 2-toothed tips, rarely from below the tips.

3

4

1 Lowest floret like the rest, hermaphrodite.

4 Spikelets falling entire and singly from the pedicels of a compact spiciform panicle. Glumes 1-nerved, narrow.

FINGERHUTHIA.

4 Spikelets in dense cylindric softly hairy panicles. Glumes and valves equally hairy all over, acuminate. Valves 3-nerved.

2 Glumes and valves keeled. Florets often with a tuft of long curled wool at the base.

STIBURUS.

3 Spikelets panicled.

POA.

3 Spikelets sub-sessile on a simple raceme (false spike).

5

6

5 Perennial. Glumes sub-equal (in the South African species), rarely conspicuously unequal. Valves lanceolate, rounded on the back or keeled towards the tip, 5-rarely 7-nerved; mucro or awn if present terminal, straight. Styles terminal on the glabrous or hairy ovary top.

FESTUCA.

5 Annual. Panicle contracted, spiciform or racemiform usually secund. Glumes usually very unequal; the lower small or sometimes obsolete. Valves subulate-lanceolate, passing into a straight, often long, awn, rounded on the back, 5-nerved. Ovary glabrous; styles terminal.

VULPIA.

5 Annual or perennial. Glumes more or less unequal. Valves lanceolate to broadly oblong, rounded on the back or keeled, 5-9-nerved; awn close to or somewhat distant from the often 2-toothed tip, rarely 0. Styles distinctly lateral on a hairy 2-3 lobed appendage of the ovary.

6 Valves 7-9-nerved; awn terminal, rarely 0. Spikelets in a raceme.

BROMUS.

BRACHYPODIUM.

TRIBE XVI. HORDEÆ.

Spikelets solitary at the nodes of the spike, with their plane radial to the rhachis. Lower glume generally suppressed except in the terminal spikelet, contiguous with the rhachis, upper one rigidly herbaceous, many nerved. Valves herbaceous to chartaceous, 5-7-nerved.

LOLIUM.

B. *Blades transversely veined, (in South African species).*

TRIBE XVII. PHAREÆ.

The only South African genus.

OLYRA.

TRIBE XVIII. BAMBUSEÆ.

Stamens 3. Fruit a true caryopsis.

ARUNDINARIA.

LIST OF SPECIES.

1 <i>Imperata</i> , <i>Cyr.</i>		10 <i>Aandropogon</i> , <i>Linn.</i>	
arundinacea, <i>Cyr.</i>	A-E.	amplectens, <i>Nees.</i>	B.
2 <i>Saccharum</i> , <i>Linn.</i>		appendiculatus, <i>Nees.</i>	AF.
Munroanum, <i>Hack.</i>	C.	auctus, <i>Stapf.</i>	F.
3 <i>Erianthus</i> , <i>Michx.</i>		Buchanani, <i>Stapf.</i>	B.
capensis, <i>Nees.</i>	A-E Z.	ceresiaeformis, <i>Nees.</i>	AF Z.
4 <i>Pollinia</i> , <i>Trin.</i>		contortus, <i>Linn.</i>	AD.
nuda, <i>Trin.</i>	E.	cymbarius, <i>Linn.</i>	Z.
villosa, <i>Spreng.</i>	B.	dichroos, <i>Steud.</i>	B D.
5 <i>Ischænum</i> , <i>Linn.</i>		distachys, <i>Linn.</i>	D.
faseiculatum, <i>Brogn.</i>	A.	Dregeanus, <i>Nees.</i>	CD.
6 <i>Rottboellia</i> , <i>Linn. f.</i>		eucomus, <i>Nees.</i>	A.
compressa, <i>Linn.</i>	A.	filifolius <i>Steud.</i>	DE.
7 <i>Urelytrum</i> , <i>Hack.</i>		filipendulus, <i>Hochst.</i>	AZ.
squarrosum, <i>Hack.</i>	AE.	halepensis, <i>Brot.</i>	AZ.
8 <i>Trachypogon</i> , <i>Nees.</i>		hirtiflorus, <i>Kunth.</i>	
polymorphus, <i>Hack.</i>	AZ.	var. <i>semiberbis</i> , <i>Stapf.</i>	Z.
9 <i>Elionurus</i> , <i>Humb. & Bonp.</i>		hirtus, <i>Linn.</i>	AF.
argenteus, <i>Nees.</i>	D.	imberbis, <i>Retz.</i>	AD Z.
		intermedius, <i>R. Br.</i>	A.
		Nardus, <i>Linn.</i>	AD Z.
		pertusus, <i>Willd.</i>	B.
		plurinodis, <i>Stapf.</i>	CD.

Andropogon, <i>Continued.</i>			
rufus, <i>Kth.</i>	Z.	Helopus, <i>Trin.</i>	BC.
Ruprechtii, <i>Hack.</i>	Z.	hymenochilum, <i>Nees.</i>	A.
Schimperi, <i>Hochst.</i>	?	interruptum, <i>Willd.</i>	A.
Schlechteri, <i>Hack.</i>	A.	Isachne, <i>Roth.</i>	DE.
Schœnanthus, <i>Linn.</i>	A.	lævifolium, <i>Hack.</i>	DF.
schirensis, <i>Hochst.</i>	D.	laticomun, <i>Nees.</i>	A.
Sorghum, <i>Brot.</i>	A.	maximum, <i>Jacq.</i>	A-D.
transvaalensis, <i>Stapf.</i>	D.	Meyerianum, <i>Nees.</i>	A.
		miliaceum, <i>Linn.</i>	D.
		miliare, <i>Lam.</i>	A.
11 Anthistiria, <i>Linn. f.</i>	A-F.	natalensis, <i>Hochst.</i>	BF.
imberbis, <i>Retz.</i>		paspaloïdes, <i>Pers.</i>	Z.
		per laxum, <i>Stapf.</i>	A.
12 Paspalum, <i>Linn.</i>	CD.	proliferum, <i>Lam.</i>	A.
dilatatum, <i>Poir.</i>	A.	pyramidalis, <i>Lam.</i>	A.
distichum, <i>Linn.</i>	A-D.	Schlechteri, <i>Hack.</i>	D.
scrobiculatum, <i>Linn.</i>		serratum, <i>Spreng.</i>	CE.
		trichopus, <i>Hochst.</i>	C.
13 Digitaria, <i>Rich.</i>	C.	tunicatum, <i>Hack.</i>	CD.
debilis, <i>Willd.</i>	AE Z.	zizanioides, <i>HBK.</i>	A.
diagonalis, <i>Stapf.</i>	A.		
diversinervis, <i>Stapf.</i>	AD Z.	15 Oplismenus, <i>Linn.</i>	
eriantha, <i>Steud.</i>	CD.	africanus, <i>Beauv.</i>	A-C.
flaccida, <i>Stapf.</i>	AC.		
horizontalis, <i>Willd.</i>	DE.	16 Axonopus, (<i>Beauv.</i>) <i>Hk. f.</i>	
monodactyla, <i>Stapf.</i>	A-E.	semialatus, <i>Hook.</i>	B-F.
sanguinale, <i>Scop.</i>	DE.		
setifolia, <i>Stapf.</i>	AC.	17 Setaria, <i>Beauv.</i>	
tenuiflora, <i>Beauv.</i>	AD E.	aurea, <i>A. Braun.</i>	A-F.
ternata, <i>Stapf.</i>	DE.	Gerrardi, <i>Stapf.</i>	A.
tricholænoides, <i>Stapf.</i>		imberbis, <i>R. & S.</i>	BF.
14 Panicum, <i>Linn.</i>	C	Lindenbergiana, <i>Stapf.</i>	AB.
æquinerve, <i>Nees.</i>	?	nigrirostris, <i>Dur. & Sch.</i>	BD.
arrectum, <i>Hack.</i>	A-C Z.	perennis, <i>Hack.</i>	A-E.
brizanthum, <i>Hochst.</i>	B.	rigida, <i>Stapf.</i>	CD.
capillare, <i>Linn.</i>	A.	sulcata, <i>Raddi.</i>	AB.
chusqueoides, <i>Hack.</i>	A.	verticillata, <i>Beauv.</i>	A.
colonum, <i>Linn.</i>	A.		
coloratum, <i>Linn.</i>	A.	18 Pennisetum, <i>Pers.</i>	
Crus-Galli, <i>Linn.</i>	A.	macrourum, <i>Trin.</i>	?
Crus-Pavonis, <i>Nees.</i>	A.	natalense, <i>Stapf.</i>	CD.
curvatum, <i>Linn.</i>	A.	sphacelatum, <i>Dur. & Schinz.</i>	E.
deustum, <i>Thb.</i>	C.	Thunbergii, <i>Kunth</i>	F.
Dregeanum, <i>Nees.</i>	A.	typhoideum, <i>Rich.</i>	BC.
Ecklonii, <i>Nees.</i>	CE.	unisetum, <i>Bth.</i>	A.
festivus, <i>Hochst.</i>	B.		
filiculme, <i>Hack.</i>	AB.	19 Stenotaphrum, <i>Trin.</i>	
gossypinus, <i>A. Rich.</i>	DE.	glabrum, <i>Trin.</i>	DE.

53 <i>Ehrharta</i> , <i>Thb.</i>		
<i>calycina</i> , <i>Sm.</i>		A.
<i>erecta</i> , <i>Lam.</i>		AD.
54 <i>Phalaris</i> , <i>Linn.</i>		
<i>arundinacea</i> , <i>Linn.</i>		D-F.
<i>minor</i> , <i>Retz.</i>		D.
55 <i>Melica</i> , <i>Linn.</i>		
<i>racemosa</i> , <i>Thb.</i>		AD.
56 <i>Fingerhuthia</i> , <i>Nees.</i>		
<i>sesleriæformis</i> , <i>Nees.</i>		E.
57 <i>Stiburus</i> , <i>Stapf.</i>		
<i>alopecuroides</i> , <i>Stapf.</i>		BF.
58 <i>Poa</i> , <i>Linn.</i>		
<i>annua</i> , <i>Linn.</i>		C.
<i>bidentata</i> , <i>Stapf.</i>		?
<i>binata</i> , <i>Nees.</i>		DE.
<i>trivialis</i> , <i>Linn.</i>		?
59 <i>Festuca</i> , <i>Linn.</i>		
<i>costata</i> , <i>Nees.</i>		CE.
<i>scabra</i> , <i>Vahl.</i>		E.
60 <i>Vulpia</i> , <i>Gmel.</i>		
<i>Myuros</i> , <i>Gmel.</i>		
61 <i>Bromus</i> , <i>Linn.</i>		
<i>maximus</i> , <i>Desf.</i>		DE.
<i>natalensis</i> , <i>Stapf.</i>		D.
<i>secalinus</i> , <i>Linn.</i>		?
<i>unioloides</i> , <i>H. B. K.</i>		C-E.
62 <i>Brachypodium</i> , <i>Beauv.</i>		
<i>flexum</i> , <i>Nees.</i>		BE-Z.
63 <i>Lolium</i> , <i>Linn.</i>		
<i>multiflorum</i> , <i>Lam.</i>		D.
<i>rigidum</i> , <i>Gaud. var. rottboel-</i>		
<i>lioides</i> , <i>Hechl.</i>		?
<i>temulentum</i> , <i>Linn.</i>		?
64 <i>Olyra</i> , <i>Linn.</i>		
<i>latifolia</i> , <i>Linn.</i>		Z.
65 <i>Arundinaria</i> , <i>Michx.</i>		
<i>tesselata</i> , <i>Munro.</i>		F.

FILICES. FERNS.

Members of this well known family are found in almost all parts of the world, several species indeed have been found to inhabit the polar regions, while in temperate countries they are more plentiful, and in favourable situations of tropical countries they abound, especially in tropical or subtropical islands, where the humidity of the atmosphere is especially suitable to their growth. In size the plants range from the minute species of *Hymenophyllum* and *Trichomanes* with scarcely any stems, and fronds less than one inch long, and which are frequently mistaken for mosses, to the large tree ferns with stems 40 feet high, and fronds 10 to 15 feet long. The rhizomes of some of the species are used medicinally as anthelmintics or astringents, the fronds of others are mucilaginous, as are the young shoots also of some of the species; some of the species are strongly scented, including our indigenous *Polypodium phymatodes* and *Nephrodium albo-punctatum*, and perhaps some others also. The scales or hairs which are found plentifully on some of the species have been used as styptics, and also for stuffing pillows, cushions, &c. They are, however, best known as ornamental plants, and a large number of species and varieties are in cultivation.

KEY TO SUBORDERS.

Sori dorsal, of few (2 to 10) capsules. Capsules opening vertically surrounded by a broad, transverse complete ring, which opens vertically by the separation of the joints of the ring. Fronds dichotomously branching.

A. GLEICHENIACEÆ.

Sori terminal or marginal from the apex of a vein. Receptacle elongated. Capsule roundish or flattened, with a complete transverse ring opening vertically. Involucre inferior, of the same texture as the frond.

B. HYMENOPHYLLEÆ.

Sori dorsal or marginal, subglobose, with or without involucre, usually stalked, more or less completely surrounded by a jointed elastic ring, opening transversely.

C. POLYPODIACEÆ

Capsules 2-valved, opening across the apex, and furnished with a short horizontal ring.

D. OSMUNDACEÆ.

Capsules 2-valved, opening at the side, and crowned by a complete operculiform ring.

E. SCHIZÆACEÆ.

Capsules concrete in a double line on the back of the ordinary pinnae, opening by slits down their inner faces.

F. MARATTIACEÆ.

Capsules 2-valved, without a ring, in two rows on a linear frond.

G. OPHIOGLOSSACEÆ.

KEY TO GENERA.

Vernation circinate in all genera except *Ophioglossum*.

Fructification dorsal.

Fructification spicate.

Fructification paniculate.

I
II
III

I. FRUCTIFICATION DORSAL.

Sori covered with an indusium.

INVOLUCRATÆ.

Sori naked.

EX-INVOLUCRATÆ.

INVOLUCRATÆ.

Indusium cup-shaped.

1

Indusium tubular or hood-like.

2

Indusium continuous, marginal.

3

Indusium semilunate.

4

Indusium kidney shaped.

5

Indusium linear-oblong, sometimes curved.

ASPLENIUM.

Indusium orbicular, attached by the centre.

ASPIDIUM.

Indusium elliptical, apparently doubled.

DIDYMOCHLÆNA.

Indusium bearing the capsules attached to its under surface.

ADIANTUM.

Fertile fronds contracted, pinnate.

6

1 Fronds herbaceous, plant small.

WOODSIA.

1 Stem arborescent, pinnæ similar.

CYATHEA.

1 Stem arborescent, having barren multifid pinnæ at base of frond.

HEMITELIA.

2 Indusium 2-valved.

HYMENOPHYLLUM.

2 Indusium entire or nearly so.

TRICHOMANES.

2 Indusium attached by base and sides.

DAVALLIA.

2 Indusium attached by base only.

CYSTOPTERIS.

3 Indusium opening outwards

LINDSAYA.

3 Indusium at first globose, not quite continuous.

CHEILANTHES.

3 Receptacle punctiform. Fronds coriaceous, except *P. geraniifolia*.

PELLEA.

3 Receptacle continuous. Fronds herbaceous, except *P. aquilina*.

PTERIS.

4 Veins netted.

LONGITIS.

4 Veins free.

HYPOLEPIS.

5 Pinnæ jointed to rachis.

NEPHROLEPIS.

5 Pinnæ not jointed to rachis.

NEPHRODIUM.

5 Frond simple.

OLEANDRA.

6 Sori marginal.

LOMARIA.

6 Sori intramarginal.

BLECHNUM.

EX-INVOLUCRATÆ.

Sori rotund, distinct, capsules numerous.

POLYPODIUM.

Sori rotund, confluent, marginal.

NOTOCHLÆNA.

Sori linear or oblong, sometimes forked.

GYMNOCRAMMÆ.

Sori linear, continuous, sub-intramarginal.

VITTARIA.

Sori marginal, capsules in minute spikes projecting from margin of frond.

Capsules irregularly spread over under surface of frond.

Capsules large, on under surface of lower segments only.

Capsules few (2-10 in each sorus) medial, frond rigid, opaque.

Capsules few, concrete, intramarginal.

LYGODIUM.

ACROSTICHUM.

TODEA.

GLEICHENIA.

MARATTIA.

II. FRUCTIFICATION SPICATE.

Barren frond ovate, vernation straight.

OPHIOGLOSSUM.

Barren frond linear, vernation circinate.

SCHIZAEA.

III. FRUCTIFICATION PANICULATE.

Fronds bi-pinnate, apex fertile.

OSMUNDA.

Fronds pinnate, barren and fertile distinct from each other. Erect.

ANEMIA.

Fronds pinnate, fertile bi-pinnate. Climbers.

ACROSTICHUM.

LIST OF SPECIES.

A. GLEICHENIACEÆ.

The only Natal genus.

GLEICHENIA.

GLEICHENIA, Sm.

Segments small, ovate. Capsules 8-5 in each sorus. On rocks in midland districts.

POLYPODIOIDES, Sm.

Segments oblong, a pair of pinnæ at each fork. Umpumulo and Botha's Hill.

DICHOTOMA, Willd.

Segments oblong, rachis woolly.

UMBRAEULIFERA, Moore.

Midlands at edge of woods. "Umbrella Fern."

B. HYMENOPHYLLEÆ.

HYMENOPHYLLUM, Hook.

A small moss-like plant with membranous toothed fronds. Involucres cut to base into two toothed lobes.

TUNBRIDGENSE, Sm.

On damp rocks midlands. A variety with unitateral fronds is occasionally met with.

GRACILE, Bory.

A small moss-like plant, fronds membranous, entire. Involucre cut half-way down.

Near Maritzburg (Sanderson) not seen by us.

TRICHOMANES, Sm.

Frond pinnatifid; rhizome creeping.

PUSILLUM, Sw.

Midlands on wet rocks, our plant is the variety "quercifolium."

PYXIDIFERUM, Linn.

Frond tripinnatifid, rhizome creeping, fronds small. On rocks and trees midlands and upper districts.

Frond tripinnatifid, erect, tufted. *RIGIDUM, Sw.*

Under waterfalls and banks of brooks, in dense shade.

Frond simple, entire or bluntly lobed.

A variety of this species was found by the writer on wet rocks, Umgonya forest, Zululand. Not seen since.

MUSCOIDES, Sw.

C. POLYPODIACEÆ.

CYATHEA, Sm.

Caudex erect, stout, pinnæ similar.

Open ground and by streamlets all over the Colony.

The only Natal species.

DREGEI, Kze.

HEMITELIA, Br.

Caudex erect or prostrate, barren pinnæ at base of frond multifid, the segments filiform.

In dense moist woods midland districts.

The only Natal species.

CAPENSIS, Br.

WOODSIA, Br.

Involute attached under the sorus, when bursting forming an irregular fringe.

Upper districts. The only Natal species.

BURGESSIEÆ, Gerr.

DAVALLIA, Smith

Rhizome creeping, sori large, marginal.

On trees and rocks, coast and midlands.

Rhizome creeping, sori small, intramarginal

Head of Natal Bay and Umpumulo only.

Stipes tufted, fronds bipinnate.

On trees and rocks, Maritzburg and Drakensberg.

NITIDULA, Kze.

SPELUNCÆ, Baker.

THECIFERA, H. B. & C.

CYSTOPTERIS, Bernh.

Fronds tripinnatifid, lanceolate, tufted, texture delicate.

In woods from 3000 feet alt. to Drakensberg.

FRAGILIS, Bernh.

LINDSAYA, Dryand.

Fronds pinnate, coriaceous, veins anastomosing.

Near Durban, and also in Zululand, the only Natal species.

ENSIFOLIA, Sw.

ADIANTUM, Linn.

Frond simple, reniform.

The variety *asarifolium*, Willd, has been collected on the Drakensberg.

RENIFORME, Linn.

Frond bi to tri-pinnate. Sori nearly straight, pinnules cuneate at base.	CAPILLUS-VENERIS, <i>L.</i>
In moist places, coast to 3000 feet alt.	
Frond tri-to quadri-pinnate. Sori curved, pin- nules rounded at base.	ÆTHIOPICUM, <i>L.</i>
In drier parts of bush, from 3000 feet alt. to Drakensberg.	

LONCHITIS, *Linn.*

Fronds ample, indusium reniform.	PUBESCENS, <i>Willd.</i>
Moist places in shade, midlands. The only Natal species.	

HYPOLEPIS, *Bernh.*

Rhizome creeping, stems smooth, tall.	ANTHRISCIFOLIA, <i>Presl.</i>
Edges of woods at from 500 to 3000 feet alt.	
Stipes tufted, zigzag, hairy.	BERGIANA, <i>Hk.</i>
Drier parts of bush, midlands.	

CHEILANTHES, *Sw.*

Frond with white glandular hairs.	HIRTA, <i>Sw.</i>
Dry rocky places, and in woods, all over the Colony.	
Frond naked, indusium membranaceous.	MULTIFIDA, <i>Sw.</i>
On rocks all over the Colony.	
Frond naked, herbaceous. Indusium ciliate.	CAPENSIS, <i>Sw.</i>
Elands Kop, near Mooi River only.	
Frond tomentose beneath. Rhizome creeping.	INDUTA, <i>Kze.</i>
Near Newcastle, (Buchanan).	

PELLEA, *Link.*

Main rachis winged throughout.	GERANIIFOLIA, <i>Fee.</i>
Drier parts of bush. Coast to 3000 feet alt.	
Fronds pinnate, fertile fronds contracted.	PECTINIFORMIS, <i>Baker.</i>
Rocks, Inanda and Noodsberg.	
Fronds 2-4 pinnate. Indusium intramarginal.	CONSOBRINA, <i>Hook.</i>
In open ground from 2000 feet alt. to Drakensberg.	
Indusium marginal, veins conspicuous.	HASTATA, <i>Link.</i>
All over the Colony, several varieties have been described.	
Indusium marginal, stipes hairy, veins indistinct.	INVOLUTA, <i>Baker.</i>
Midlands districts; common.	
Frond slatey green, 2-3 pinnate, texture thick.	CALOMELANOS, <i>Link.</i>
On rocky ground from near the Coast to Drakensberg.	
Frond green, 1-2 pinnate, veins anastomosing.	BURKEANA, <i>Baker.</i>
Noodsberg, very rare.	

PTERIS, *Linn.*

Fronds pinnate, pinnæ numerous.	LONGIFOLIA, <i>Linn.</i>
From near the Coast to 2500 feet alt. not very common.	
Fronds pinnate, pinnæ in 2-6 pairs.	CRETICA, <i>Linn.</i>
Moist banks and drier parts of bush from 1500 feet alt. to Drakensberg.	
Fronds 2-3-pinnate, fertile segments entire or nearly so	QUADRIAURITA, <i>Retz.</i>
In woods, Coast to Midlands.	
Fronds 2-3-pinnate, fertile segments toothed at apex.	FLABELLATA, <i>Thb.</i>
Moist places all over the Colony.	
Fronds 3-4-pinnate, coriaceous, rhizome creeping, Open ground all over the Colony. "Bracken."	AQUILINA, <i>Linn.</i>
Fronds 3-4-pinnate, herbaceous, rhizome creeping, barren segments serrate.	BUCHANANI, <i>Baker.</i>
Coast and Midlands to 4000 feet alt.	
Fronds 3-4-pinnate, herbaceous, rhizome creeping, barren segments entire.	INCISA, <i>Thb.</i>
Moist places in woods, Midlands.	

LOMARIA, *Willd.*

Pinnæ of barren frond not distinctly separated from each other.	1
Pinnæ of barren frond distinctly separated from each other.	2
1 Caudex erect.	
From 3000 feet alt. to Drakensberg. Formerly known here as <i>L. discolor</i> , <i>Willd.</i>	INFLEXA, <i>Kze.</i>
1 Rhizome horizontal.	
Common in moist places all over the Colony.	ATTENUATA, <i>Willd.</i>
2 Pinnæ cordate or auricled, gradually smaller towards base.	
Fertile frond contracted.	PUNCTULATA, <i>Kze.</i>
A very variable fern, the chief varieties are as under :	
Var. 1, Atherstoni, <i>P. & R.</i> Fertile frond contracted. Sori in a continuous line in upper pinnæ, not continuous in the lower ones.	
Var. 2, Krebsii, <i>Sims.</i> Sori at more or less acute angles with the midrib.	
Var. 3, intermedia, <i>Sims.</i> Sori in an interrupted line close to midrib, but not parallel with it. These varieties are not uncommon in the midlands.	
2 Pinnæ acute at apex. Veins conspicuous.	PROCERA, <i>Spreng.</i>
From near Coast to 3000 feet alt. usually near streamlets.	

2	Pinnæ obtuse at apex, veins indistinct. Open ground in moist places, at from 2000 to 4000 feet alt.	BORYANA, <i>Willd.</i>
		BLECHNUM, <i>Linn.</i>
Fertile pinnæ contracted. Sori continuous. Midlands, not uncommon.		AUSTRALE, <i>Linn.</i>
		ASPLENIUM, <i>Linn.</i>
Veins simple or branched, sori linear or linear-oblong, straight, not marginal.		I. EUASPLENIUM.
Veins simple, ultimate divisions of frond narrowly linear, sori linear or linear-oblong, marginal or submarginal.		II. DAREA.
Veins free, sori more or less curved, sometimes horse-shoe shaped.		III. ATHYRIUM.

I. EUASPLENIUM.

Veins pinnate.
Veins bi-tripinnate.

A. VEINS ONCE PINNATE.

Rachis brown, polished, veins indistinct.	1
Rachis brown, polished, veins conspicuous.	2
Rachis green or grey.	3
Small moss-like plants.	4

1	Sori numerous, base of pinnæ truncate. In woods near Mooi River.	TRICHOMANES, <i>Linn.</i>
1	1 Sori numerous, base of pinnæ hastate or cordate. In woods near Mooi River.	EBENEUM, <i>Ait.</i>
1	1 Sori few, 1-2 on each pinna. Damp places Town Hill to Drakensberg.	MONANTHEMUM, <i>Linn.</i>
2	2 Pinnate or bipinnate, pinnæ in 15-40 pairs, sori on both sides of the midrib. The following varieties occur in Natal.	ERECTUM, <i>Bory.</i>
	Var. 1, lunulata, <i>Sw.</i> Pinnæ in 30-40 pairs, rounded, crenate. In woods, Midlands.	
	Var. 2, Zeyheri, <i>P. & R.</i> Pinnæ in 30-40 pairs, lower pinnæ cut down to the rachis. Lynedoch and Umpumulo. (Buchanan).	
	Var. 3, brachyotus, <i>Kze.</i> Pinnæ in 15 to 25 pairs, broad, unequally toothed. In woods. Midlands.	
	Var. 4, gracile, <i>P. & R.</i> bipinnate, fronds membranous. In woods, Midlands.	
2	2 Pinnæ in 15 to 25 pairs deeply lobed, lobes toothed. In woods, Noodsberg to Drakensberg.	PROTENSUM, <i>Schr.</i>

2 Rhizome creeping, sori close to midrib. *SERRA, L. & F.*
 In woody ravines, Noodsberg

3 Pinnæ oblong-lanceolate, conspicuously toothed. *ANISOPHYLLUM, Kze.*
 Common in shade 2000 to 4000 feet alt.

3 Pinnæ ovate, acuminate, entire or nearly so. *GEMMIFERUM, Schr.*
 In drier parts of bush 1000 to 3000 feet alt.

3 Pinnæ ovate-acuminate, finely serrate, the lowest pinnæ small, rounded. *PRIONITIS, Kze.*
 From near Coast to 3000 feet alt.

Upper edge of pinnæ sharply toothed. *KRAUSSII, Moore.*
 In shade in upper districts.

Upper edge of pinnæ bluntly lobed. *SANDERSONI, Hk.*
 On moist rocks, and tree trunks 1500 to 2000 feet alt.

B. VEINS BI-OR-TRIPINNATE.

Sori in centre of segments, stipes and rachis brown. *ADIANTUM-NIGRUM, Linn.*
 Rocky places Umpumulo, Greytown, Mooi River, and Town Hill.

Sori in centre of segments, stipes and rachis greenish. *VARIANS, Hk. & Gr.*
 Moist rocks in shade from 2000 feet alt, to Drakensberg.

Sori flabellate, rachis naked. *CUNEATUM, Lam.*
 From Coast to 2000 feet alt.

Sori flabellate, rachis fibrillose. *FURCATUM, Thb.*
 Noodsberg to Drakensberg.

Var. tripinnatum, Baker, larger and more divided than type. *Noodsberg to Drakensberg.*

II. DAREA.

Pinnate, segments more numerous on upper side of pinnæ. *BRACHYPTERON, Kze.*
 Moist rocks, Midlands.

Pinnate segments equal on both sides or nearly so. *THUNBERGII, Kze.*
 Near streamlets in shade, Midlands.

Bipinnate. *RUTAEFOLIUM, Kze.*
 Common in drier parts of bush. Coast to Midlands.

III. ATHYRIUM.

Rhizome creeping. *SCHIMPERI, A. Br.*
 Rocky places at from 2500 feet alt. to Drakensberg.

Stipes tufted, pinnulæ stalked. *ASPIDIOIDES, Schl.*
 Moist places, Midlands.

Stipes tufted, pinnulæ decurrent. *FILIX-FŒMINA, Bernh.*
 Upper districts.

DIDYMOCHLÆNA, *Desv.*

The only Natal species.

Sub-arborescent. In woods, Midlands.

ASPIDIUM, *Sw.*

Veins anastomosing

In woods from 2000 feet alt. to Drakensberg.

Rhizome wide creeping, pinnae awned.

In woods from 2000 feet alt. to Drakensberg.

Pinnulae not awned. Coriaceous, sori large.

Moist places in Midlands.

Bipinnate. Stipes tufted pinnulae awned, scales brown.

Var. *luctuosum*, *Kze.* Similar but scales black.

In shade, Noodesberg to Drakensberg.

Tri-or quadripinnate.

Moist places in woods, from 2500 feet alt. to Drakensberg.

NEPHRODIUM, *Rich.*

Veins free.

Veins anastomosing.

FALCATUM, *Sw.*PUNGENS, *Kaulf.*CAPENSE, *Willd.*ACULEATUM, *Sw.*ARISTATUM, *Sw.*

I. LASTREA.

II. EU-NEPHRODIUM.

I. LASTREA.

Rhizome creeping, margin of fertile frond reflexed.

In marshes all over the Colony.

Rhizome creeping, margins of fronds flat; scented.

Inanda and Noodesberg.

Stipes tufted, indusium bristly.

Ravines. Coast and Midlands.

Stipes tufted, pinnulae serrate and awned.

Moist places, Coast and Midlands.

Stipes tufted, pinnae imbricated, not awned.

Midlands, usually in Ant-bear holes.

Stipes tufted, frond soft with woolly pubescence.

In shade, Midlands.

THELYPTERIS, *Desv.*

ALBO-PUNCTATUM,

[*Desv.*]BERGIANUM, *Baker.*INEQUALE, *Hk.*ATHAMANTICUM, *Hk.*CATOPTERON, *Hk.*

II. EU-NEPHRODIUM.

Lowest pinnae as large as the other; coriaceous.

Moist places, Coast and Midlands.

Lowest pinnae smallest, soft, hairy.

Moist places, Coast and Midlands.

UNITUM, *R. Br.*MOLLE, *Desv.*NEPHROLEPIS, *Schott.*

The only Natal species.

Swamp at head of Natal Bay.

OLEANDRA, *Cav.*

The only Natal species.

ACUTA, *Pr.*ARTICULATA, *Pr.*

EX-INVOLUCRATEÆ.

POLYPODIUM, *Linn.*

Veins free. Stems continuous with the caudex.
Sori medial on the veins.

Veins pinnate, the lower veinlets of continuous groups joining.

Veins free. Stems articulated to rhizome, sori generally terminal on the veins.

Veins forming ample regular areolæ, each with a single distinct free included veinlet, the sori terminal on the latter, often in the costal areolæ only, sometimes in second or even third row.

Primary veins distant from the mibrrib to the edge, connected by parrallel veinlets, the areolæ similar, containing two or more sori, the free veinlets all directed towards the edge.

Areolæ fine, copious, irregular, the free veinlets spreading in various directions, the sori various in position, generally on the back of united veinlets.

I. EU-PHEGOPTERIS.

Stipes densely tufted. Frond 2 feet or more long ; 8-10 in broad.

Upper and midland districts.

II. GONIOPTERIS.

Sori medial, frond often proliferous.

Coast near Durban ; Verulam.

Sori close to main veins ; frond often gemmiferous.

Near streams in woods ; Midlands.

I. EU-PHEGOPTERIS.

II. GONIOPTERIS.

III. EU-POLYPODIUM.

IV. GONIOPHLEBIUM.

V. CAMPYLONEURUM.

VI. PHYMATODES.

OBTUSILOBUM, *Desv.*

PROLIFERUM, *Presl.*

UNITUM, *Hk.*

III. EU-POLYPODIUM.

Pinnate or pinnatifid. Fronds naked.

VULGARE, *Linn.*

Common " polypody." Dargle to Drakensberg.

IV. GONIOPHLEBIUM.

Rhizome creeping, fronds pinnatifid, densely scaly beneath.

INCANUM, *Sw.*

V. CAMPYLONEURUM.

Frond simple, densely white woolly.

AURICANUM, *Mett.*

VI. PHYMATODES.

Fronds simple with small scattered scales beneath.

LANCEOLATUM, *Linn.*

On trees and rocks from 1500 feet alt. to Drakensberg.

Frond oblong-lanceolate, naked.	LINEARE, <i>Thb.</i>
On trees and rocks all over the Colony.	
<i>Var. Schraderi, Mett.</i>	
Frond oval or oblong, rhizome densely scaly, wide creeping.	LYCOPODIOIDES, <i>Linn</i>
Coast and Midlands, common.	
<i>Var. Mackenii, Baker</i> , is merely a luxuriant form.	
Frond oblong, sori large, irregular but in two rows.	NORMALE, <i>Don.</i>
Moist rocks in woods, Midlands.	
Frond strap shaped, elongated, sori scattered, minute.	IRIOIDES, <i>Lam.</i>
On trees and rocks, Coast and Midlands.	
Frond pinnatifid; scented in drying.	PHYMATODES, <i>Linn.</i>
Near Sea Coast only.	

NOTHOCHLÄENA, *R. Br.*

Stipes naked, pinnae distant.	INEQUALIS, <i>Kze.</i>
On dry rocks, Inanda; with Northern aspect.	
Stipes densely scaly, pinnae close.	ECKLONIANA, <i>Kze.</i>
Rocky places from 2000 feet alt. to Drakensberg.	
Frond deltoid.	BUCHANANI, <i>Baker.</i>
Damp rocks with Southern aspect, Inanda and Noodsberg.	

GYMNOGRAMME, *Desv.*

I. VEINS FREE.

Veins pinnate, fronds herbaceous, not covered with powder.	TOTTA, <i>Schlech.</i>
By streamlets in woods, Midlands.	
Veins flabellate, fronds coriaceous, lower surface scaly.	CORDATA, <i>Schlecht.</i>
On rocks in woods, Midlands to Drakensberg.	
Fronds covered on under surface with white or golden powder.	ARGENTEA, <i>Mett.</i>
On dry or moist rocks, Noodsberg to Drakensberg. A very large and fine variety with golden powder is found at foot of precipitous rocks, Noodsberg <i>var. aurea</i> , "Gold" and "Silver Ferns."	

II. VEINS ANASTOMOSING.

Frond simple, naked, rhizome wide creeping.	LANCEOLATA, <i>Hk.</i>
On trees and damp rocks. Inanda and Drakensberg.	

VITTARIA, *Sm.*

Fronds narrow, grass-like, glabrous.	LINEATA, <i>Sw.</i>
On trees and rocks, Coast and Midlands "Boot Lace Fern."	

ACROSTICHUM, *Linn.*

Fronds simple. Veins free.
 Barren fronds pinnate, veins free.
 Barren fronds pinnate, veins anastomosing.

A. ELAPHOGLOSSUM.

Margins of fronds ciliated. 1
 Margins of fronds not ciliated. 2

1 Barren fronds ovate or ovate-acuminate.

On wet rocks in Midlands at 3000 to 5000
 feet alt.

1 Barren fronds linear or strap-shaped.

On wet rocks in Midlands.

1 Plant small, surface of fronds densely scaly.

On moist rocks, Midlands and Upper Districts.

2 Fertile fronds much the narrowest.

On rocks in shade, Midlands.

2 Fertile frond equalling or exceeding the
 barren one in breadth.

On rocks and trees, Upper Districts.

HYBRIDUM, *Bory.*AUBERTII, *Desv.*SPATHULATUM, *Bory.*LATIFOLIUM, *Sw.*CONFORME, *Sw.*

B. STENOCHLÆNA.

Fertile frond bipinnate, the pinnae much con-
 tracted. Climber.

Climbing trees. Coast to 2500 feet alt.
 Mostly in swamps.

TENUIFOLIUM, *Baker.*

C. CHRYSOCOMA.

Fronds erect, upper pinnae only, fertile.

Near the Sea Coast. Shores of Natal Bay.

AUREUM, *Linn.*

D. OSMUNDACEÆ.

Fertile fronds much contracted.

OSMUNDA.

Fertile pinnae at base of fronds only.

TODEA.

OSMUNDA, *Linn.*

The only species.

REGALIS, *Linn.*

All over the Colony.

TODEA, *Willd.*

The only species.

BARBARA, *Moore.*

By streams and in moist places, Coast to
 3000 feet alt.

E. SCHIZEACEÆ.

Fronds rush-like. Fructification spicate.

SCHIZAEA.

Fronds leafy, fructification paniculate.

ANEMIA.

Fronds leafy, fructification dorsal.

MOHRIA.

Fronds leafy, fructification on margin of frond.

LYGODIUM.

SCHIZÆA, *Smith.*

Fertile segments 4 to 8, sub-erect.

TENELLA, *Klf.*Near a brook, Umtwalumi, gathered by
McKen only.

Fertile segments 10 to 15, nearly horizontal.

PECTINATA, *Sm.*

Damp hill-side, Inanda, (Wood).

ANEMIA, *Sw.*

Barren and fertile fronds separate from each other.

DREGEANA, *Kze.*

In drier parts of bush, Midlands.

MOHRIA, *Sw.*

Fronds bipinnate, sori marginal.

CAFFRORUM, *Desv.*

All over the Colony.

LYGODIUM, *Sw.*Much branched, barren, pinnæ small. Capsules
forming spikes along edge of fertile frond.SCANDENS, *Sw.*

In wood, Zululand.

F. MARATTIACEÆ.

MARATTIA, *Sm.*

Fronds 6 to 15 feet long, usually bipinnate.

FRAXINEA, *Sm.*

In shade, Coast to 3000 feet alt.

G. OPHIOGLOSSACEÆ.

OPHIOGLOSSUM, *Linn.*Frond ovate, tapering to base, mibril more or less
distinct.VULGATUM, *Linn.*

Coast districts only.

Frond cordate at base, without distinct mibril.

RETICULATUM, *Linn.*

FERNS UNKNOWN TO US.

Cheilanthes parviloba, *Sw.* In his "Ferns of South Africa," Sim
includes this species as having been collected by Rev. Buchanan
in upland bush, but we have not met with it, and have no
specimen.Asplenium Gueinzianum, *Mett.* Said to have been collected by
Gueinzius, locality not given, we do not know it.Asplenium solidum, *Kunze.* Said to have been gathered by McKen
near Peel's, Umlaas, but is quite unknown to us.Nephrodium Mauritianum, *Fee.* Collected by Rev. J. Buchanan near
head of Bay of Natal, not seen by us. It nearly resembles *N. Bergianum*, *Baker*, but differs by its veinlets, two or more of
which on pairs of neighbouring pinnules meeting at the base.Nephrodium Filix-mas, *Rich.* var. elongatum. This species has been
included by collectors, ourselves included, with *N. inaequale*,
from which it differs simply by triangular outline of the frond,
the lower pinnæ being the largest.

Gymnogramme ochracea, *Presl.* Unknown to us, but said to have been collected by Gerrard in Natal, and by Bolus in Transvaal.
Lycopodium daeiydioides, *Baker.* Said to have been found in Natal, but quite unknown to us.

EQUISETACEÆ.

This Order contains one genus only, the species are usually found in temperate regions and are rare in the tropics. The stems of several of the species are rich in silica, and are used for polishing, and sold in Europe in small bundles under the name of "Dutch rushes."

EQUISETUM, *Linn.*

Stem tall, simple or branching, ribbed. *RAMOSISSIMUM*, *Desf.*
 The only Natal species, usually found in damp places "Mares tails."

LYCOPODIACEÆ.

This Order includes more than 100 species, many of them are very difficult to rear in cultivation, except, perhaps, those that grow on rocks or trees. The minute microspores are very inflammable, and are used for several purposes, and some of the species are said to have medicinal properties.

Capsules uniform, reniform; 1-celled.
 Capsules 3-lobed, 3-celled.

LYCOPODIUM.
PSILOTUM.

LYCOPODIUM, *Linn.*

Stems erect or sub-erect.	1
Stems pendulous.	2
Stems procumbent.	3

1 Capsules in axils of ordinary leaves all along the stem.

On rocks and trees in Midlands.

2 Capsules in axils of ordinary leaves.

On trees and rocks in Midlands.

2 Capsules in upper parts of stem, the bracts passing gradually into ordinary leaves.

On rocks and trees 2000 to 4000 feet alt.

3 Fertile stem erect, leafy, branched.

Moist ground Coast, to 3000 feet alt.

3 Fertile stem erect, nearly naked, branched.

Wet places in Midlands.

3 Fertile stem erect, nearly naked, unbranched.

Very wet places, Coast to 3000 feet alt.

SAURURUS, *Lam.*

VERTICILLATUM, *Linn.*

GNIDIODES, *Linn.*

CERNUUM, *Linn.*

CLAVATUM, *Linn.*

CAROLINIANUM, *Linn.*

PSILOTUM, *Swartz.*

Rhizome wiry, creeping, stems 3-angled, almost leafless.

On old trees in Coast districts; rare,

TRIQUETRUM, *Sw.*

SELAGINELLACEÆ.

A group of some 200 or more species many of which are in cultivation, but none have any economic value so far as known to us.

Capsules 1-celled, 2-valved, in the axils of the terminal bracts, the smaller kind nearer the apex, larger nearer the base of spike. *SELAGINELLA.*

Capsules 1-celled, in axils of rush-like leaves, those with large spores amongst outer leaves, those with small spores amongst the inner ones. *Isoetes.*

SELAGINELLA, Spring.

Leaves all of one kind, set all round the stem. 1

Leaves of two kinds, a line of larger spreading ones along each side, and two lines of smaller ascending ones on upper surface. 2

Perennials.

Leaves as in preceding. Annuals, of thin texture. 3

1 Annual, sub-erect, leaves not awned.

Not known to us, but said to occur in Natal.

1 Perennial, procumbent, leaves awned.

2 Stem not jointed, 2-3 inches long, sparingly branched.

In damp places, Midlands.

2 Stem jointed, 6 to 12 inches or more long, much branched.

In damp woods all over the Colony.

3 Stems 3 to 4 inches long, trailing, intermatted, sulcate on back and face.

Banks of Tugela River. Not known to us.

KRAUSSIANA, A. Braun.

MACKENII, Baker.

NATALENSIS, Baker.

Isoetes, Linn.

A small rush-like plant, with bulbous crown, and numerous narrow, rush-like leaves 1 to 4 inches long.

Not known to us, but collected near Griffin's Hill by Dr. Rehmann.

RHIZOCARPEÆ.

A group of minute plants floating in water or growing in or near water, they have no economic value though the leaves of some species of *Marsilia* are eaten by cattle.

Capsules in the axils of the leaves, of two kinds, the large and round ones containing many minute spores, the smaller ovoid, with one large spore.

Sporangia of large and small spores, attached together in groups by a mucilaginous cord, and enclosed in a 2-valved stalked capsule.

AZOLLA.

MARSILIA.

AZOLLA, *Lam.*

A minute plant $\frac{1}{2}$ to 1 inch long with 3-5 pairs of alternate branches, which gradually diminish in length upwards.

PINNATA, *R. Br.*

MARSILIA, *Linn.*

Rhizome short, petioles 4-6 in. long, leaflets $\frac{1}{2}$ in. long, two lines broad. Near Fox Hill; Noodsberg; Durban Flat. Not seen by us.

CAPENSIS, *A. Br.*

Rhizome wide creeping, petioles 4-6 in. long when out of water, and up to 18 in. long when in water. Leaflets $\frac{3}{4}$ in. long. and broad. Not seen by us.

MACROCARPA, *Pres.*



DIRECTIONS FOR DRYING AND PREPARING BOTANICAL SPECIMENS.

—:-o:-

Provide two or more boards about 18 inches by 12 inches, and a quantity of unsized paper, old newspapers folded to a size a little smaller than the boards answer fairly well, blotting paper is too tender and too expensive, but the felt paper used for placing under carpets is much better, and a single sheet of this between each set of plants is sufficient; if newspapers are used each should be folded three times, which will give eight sheets between each set of specimens; lay the specimens on the paper taking care not to overlap them, and it may be found necessary to cut away leaves or twigs from the under side, so that the specimens may lay as flat as possible. When the sheet will hold no more place another similar sheet of paper of eight thicknesses of newspapers or a single sheet if of felt paper over the specimens and proceed as before until a pile of 6 or 8 inches is formed, then place one of the boards underneath and another on the top of the pile and fasten tightly with a strap which should be drawn as tightly as possible. Drying boards formed of crossed laths about 1 inch by $\frac{3}{4}$ inch are better than boards as they permit of freer evaporation, but the iron frames are much the best. The great secret of preparing good specimens is to dry them as quickly as possible, so that it is necessary to change the paper at least once in every 24 hours, drying the papers thoroughly before using them again. The iron drying frames with handle for carrying are by far the best, and may be obtained in Capetown, they are very handy, not expensive, and will last for many years. When quite dry, the specimens may be placed between single sheets of newspapers, but should not overlap each other more than necessary. No specimen should be longer than 16 or broader than 10 inches. A botanical specimen to be complete should include stem or twigs, leaves in position, flowers open and in bud, fruit young and nearly mature, this may not always be possible, but the utmost completeness should be aimed at, mere scraps are of little value and are worse than useless, when practicable the whole plant should be taken, and when necessary cut into two or more pieces, or folded over once or twice, whichever may be most convenient. Trees and shrubs should be represented by twigs torn off at the origin, taking care to secure both flowers and fruit. Leaves should be laid flat upon the paper, so as to show clearly their shape and position on the stem, this is often best done at the first changing of the papers, when the specimens have become wilted by evaporation, and lastly each specimen should have attached to it a small piece of paper upon which should be written the popular or scientific name of the plant if known to the collector, date of collection, colour of the flower, habit of the plant, and

height above sea level of the place where it was collected, and all specimens should be consecutively numbered. It must be remembered that if the specimens are to be scientifically named ample material must be provided, it will, therefore, be found best to collect at least three specimens of each, one to be retained by the collector, and it is advisable to dry with each a few loose flowers for dissection. Very succulent plants may require to be killed by immersion of all but the flowers for a few seconds in boiling water, this must be done carefully, and the paper afterwards should be changed more frequently than usual or the plants may rot instead of drying. Any specimens or parcels of specimens sent to the Herbarium will be carefully examined, and a list of the names will be sent to the donor. All specimens sent for naming become the property of the Colonial Herbarium, and cannot be returned except by special permission obtained beforehand. All further information will be willingly given on application to the Director.



ERRATA.

PAGE.

13. 11th line from bottom for "Podostemmaceæ" read "Podostemaceæ."

14. 13th line from bottom for "Podostemmaceæ" read "Podostemaceæ."

16. 3rd line from top for CXVCIX read CXCIX.

21. 15th line from bottom for "Trimeris" read "Trimeria."

26. 12th line from top for "cococarpa" read "coccocarpa."

27. 20th line from top for "Erthroxylon" read "Erythroxylon."

36. 8th line from bottom for "Raemes" read "Racemes."

39. 8th line from top for "turged" read "turgid."

46. 14th line bottom for "mucosa" read "muscosa."

47. 9th line from top for "two species" read "three species."

69. 6th line from top delete "12 Microglossa, DC."

69. 7th line from top delete *Mespilifolia*, Bth. B.

69. 15th line from top read for "mespilifolia, DC." read "mespilioides, Bth."

70. 14th line from base for "squammosum" read "squamosum."

79. 3rd line from top for "5-7 joined" read "5-7 parted."

79. Delete "Mimusops Schinzii, Engl." and for "M. natalensis, Schinz," read "natalensis, Engl."

81. 14th line from top for "Acokanthzra" read "Acokanthera."

83. 12th line from base for "each" read "each scale."

118. 15th line from top for "Claoxylo" read "Claoxylon."

119. 12th line from top for "dioico" read "dioica."

124. 16th line from top for "Ophryideæ" read "Ophrydeæ."

126. 7th line from top for "Maudæ" read "Maudae."

142. 2nd line from top for "two" read "one."

142. 3rd line from top for "one" read "two."

144. 20th line from bottom for "usually jointed" read "unjointed."

145. Last line for "Scipus" read "Scirpus."

154. 13th line from bottom for "low" read "lower."

ADDITIONS TO LIST.

<i>Cornus capitata</i> , <i>Wall.</i>	D.
<i>Helichrysum argentissimum</i> , <i>J. M. Wood.</i>	D.
<i>Cliffortia prostrata</i> , <i>Schlechter.</i>	?
<i>Mimusops concolor</i> , <i>Harv.</i>	A.
<i>Royena Simii</i> , <i>O. Kuntze.</i>	A.
<i>Monsonia biflora</i> , <i>Harv.</i>	D-F.

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